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THE GREAT CHARTER-HOUSE SCHOOL.

ONE of the well-known schools of England, ranking behind those of Eton, Westminster, and Winchester, but of great reputation, nevertheless, is that of the Charter-House. The Hospital of the Charter-House was founded by Thomas Sutton, in the reign of James I., and, as originally established, consisted of "an Hospital for the relief of poor aged, maimed, needy, or impotent people, and a Free School for the instructing, teaching, maintenance, and education of poor children or scholars."

The School, with which alone we are at present here concerned, is open to boys of the three following descriptions:—Foundation scholars; Non-Foundation scholars, including boarders in the houses approved by the Governors for the purpose of receiving such boys; and Day boys.

The Foundation scholars are, with certain exceptions, nominated by the Governors, who exercise this right in rotation. The maximum number fixed by the Statutes of 1627 was 40; to this number, however, certain additions have been made from time to time, the result of which is, that there are now 44 on the Foundation as scholars. It is stated to be the intention of the Governors to increase the number to 60. Of the present number (44), under orders made by the Governors, in 1850 and 1860, eight places are appropriated as prizes for competition among boys in their 14th or 15th year, who shall have previously spent not less than one year in the school. The present result of this is, "that every year two scholars are selected by competition; and on their names being reported to the Assembly, they are appointed scholars, and become entitled to all the advantages" belonging to that position. Those boys who are nominated "must be between the ages of 10 and 14, and able to pass an examination proportioned to age in classics and arithmetic." This examination was first instituted, and its subjects and extent defined, by orders made by the Governors, in 1844 and 1845. It appears, as stated by the Head Master of the School, to be "of the most elementary kind."

The Foundation scholars board in a house appropriated to them, to which very considerable additions have recently been made by the Governors, "at a cost of more than £4000." In this house there are two common rooms, one for the upper, the other for the lower boys; breakfast and tea being taken by all in the latter. There is also a dining hall, and for a few of the upper boys small studies.

The privileges and advantages of a Foundation scholar are as follows:—"He receives gratuitously board, lodging, medical attendance, and education, including classics, mathematics, French, German (if in sixth form), history, geography, and divinity. He is also provided with clothes during the school terms, and with a gown; and, if in the upper school, with a cap or trencher. If he passes a satisfactory examination at the age of 18, he receives an exhibition of £80 a year for four years at any college in either of the Universities of Oxford or Cambridge." A gratuity of £100 is also granted in the case of any Foundation scholar who goes into the army or navy, or any profession or trade requir-

ing an outfit. "In case of illness, they are taken care of by the matron, in the apartments provided for them in her house, and are nursed and dieted in any illness without any charge for medical attendance or medicine." The only *school* charges to which a Foundation scholar is liable are for books and stationery; and a payment of four guineas per annum by lower boys, and five guineas by upper boys, to the matron, for private washing and the care of private clothes. Foundation scholars have also the preference, under the Charter, to the nine livings in the patronage of the Governors. By an order of the Governors of 4th March, 1856, scholars on the Foundation are considered superannuated on completing the 17th year of their age, unless they are reported by the examiners as fit to remain as candidates for exhibitions. Such candidates leave the school on completing their 18th year, unless they are in the 6th form, in which case they remain until the completion of their 19th year.

For the exhibitions there is at present no competitive examination; for it appears that every Foundation scholar who satisfies the Examiners (gentlemen nominated by the Archbishop of Canterbury), so far as to render it most probable, in their opinion, that he will pass the first public examination in the University, is entitled to an exhibition.

At present, all these exhibitions are of the same value, viz., £80 per annum for four years, with an additional sum of £20 in the last year.

The boys not on the Foundation may be classed under two heads, Boarders and Day boys. The former are lodged in houses sanctioned by the Governors. In February, 1862, when the last written return was made to the Commissioners, they were 45 in number, viz., 30 in the Head Master's house, and 15 in that of the Second Master. Occasionally, also, a few boys have lodged in the private house of the Reader. The charge in the houses of the two Masters named are: for board and education, including washing and medical attendance, £80 per annum up to the fifth form, and in and above that form £90. "Education" includes classics, mathematics, writing, geography, history, and divinity.

There are extra charges for,—

French, £2 2s. (Voluntary except for Foundation.)

German, £2 2s. (Voluntary except in 6th Form.)

Chemistry, £2 2s.
Singing, £2 2s.
Drawing, £5 5s.
Drilling, £1 1s.
} Voluntary.

In the few cases in which a boy has private tuition, the charge made by the private tutor for each is from eight to twelve guineas per annum, varying with the place of each boy in the school, and his want of individual superintendence.

For Day boys, the annual charge is £18 18s. per annum. The average number is from 30 to 35. The Governors have recently provided for these boys two comfortable rooms, which they may occupy, if they wish, between school hours.

The total number of the School has varied very materially from time to time. A table showing the numbers and fluctuations since 1818 is given by Mr. Elwyn, the late Head Master. It appears from this that the numbers were—

In 1825, ...	480
" 1835, ...	99
" 1845, ...	187
" 1855, ...	133

The number is now limited, by an order of the Governors, to 200. At present it is 136.

The School is arranged in separate Classical, Mathematical, and French departments. Of these, the Classical department has six forms, one of which, the fifth, is divided into two parts; the Mathematical has seven divisions, and the French three. In each of the departments (with the exception of the fifth and sixth Classical forms) a boy rises mainly by proficiency, though age is not disregarded. The boys take places at, and are marked at the end of, each lesson, and according to the marks gained are arranged at the end of the week in order of merit. The plan of adding marks for attention and progress in the Mathematical divisions, and those gained in the Classical work, has been lately adopted, and appears

to work well. In the fifth and sixth Classical forms marks are given for work done; in the former, changes in place are made from time to time according to merit (more consideration being given to age than in the lower forms); in the latter, besides arranging the boys according to the marks gained, a prize is given each term for the highest marks.

There are six resident Masters, all of whom take some part in the Classical instruction. All take part also in the Mathematical teaching, though not in the same order as in the former case.

For the instruction in French, two Masters attend twice in a week for two hours on each occasion. The study of French is, under a recent order of the Governors, obligatory upon all who do not learn German. A German Master instructs the sixth form (all in that form being obliged to learn it) once a week for two hours, and those of other forms who choose it. A Drawing Master, a Singing Master, and a Chemical Lecturer, attend respectively twice a week. These, as before stated, are voluntary subjects.

The following is the gross amount of remuneration stated by Mr. Elwyn to have been received on an average of years, from all sources, by himself and those Masters who are engaged in teaching those branches of education which are obligatory upon the whole or some portion of the school.

Head Master, $5,324 per annum.

Second Master, $3,388 per annum.

First Assistant, $896, without rooms.

Second Assistant (who superintends the Foundation boys, and has a few private pupils), $968, with rooms.

Third Assistant (also Reader, with an independent salary), $532.40, with rooms.

Mathematical Assistant (including income from private pupils), $968, with rooms.

The French Master receives $389.20 from the Governors, and two guineas from each of the non-foundation boys who learn (from 40 to 50 in number), in all about $822.80 per annum; the Assistant Mathematical Master about $532.40 per annum; the German Master about $203.28 per annum. In our present depreciated currency, the above must be multiplied by a figure varying from 2.15 to 2.50.

The appointment of the Head and Second Masters rests with the Governors; the nomination of the Mathematical Usher with the Head Master, subject to the approval of the Governors; and the other Assistant Masters are appointed by the Head Master, with the approbation of the Master of the Hospital, who, in addition to the control of the Hospital, exercises a somewhat ill-defined, but practically an important, influence on the management of the School.

The ordinary and regular promotion from one form to another takes place once a year, and depends upon the annual examination, which applies to the whole School. Every boy, then, unless he is very backward, moves up from the form in which he is. A clever boy, however, would get a remove oftener than that, his promotion depending upon his marks, and his general conduct.

In promotion in the Classical forms no weight is attached to French, promotion in the French department being entirely distinct and independent. As regards Mathematics, however, Mr. Elwyn introduced a plan under which every week a boy is marked according as he has done his Mathematics, and these marks are added to his Classical marks, so as to affect his place in the Classical form, though his position in the Mathematical classes is distinct from his Classical position.

In the annual examination above referred to, the whole School is examined in Divinity, Classics, and Mathematics, and papers are set for the higher forms. This examination, as well as those mentioned below in these subjects, is conducted as above stated by examiners appointed by the Archbishop of Canterbury. Those boys who learn French, German, Drawing, or Chemistry, are also examined in these subjects. For the Foundation scholars there is an additional examination in the month of December in Classics and Arithmetic, and a report is also presented from the Head French Master of their progress and conduct.

At the annual examination prizes are awarded in all the Classical, Mathematical, French, and German divisions, and there are also medals given in the fifth and sixth forms for Latin prose and Greek verse

translation, and for original composition in English and Latin verse. Divinity prizes, too, are given by the Reader; and two prizes, one in each of the fifth and sixth forms, by the Preacher, for a Theological Essay. In Chemistry and Drawing prizes are given by the respective teachers of these subjects. These are all open to the competition of the whole School. As regards exhibitions—besides those above referred to, limited to the Foundation scholars, and available at any College at Oxford or Cambridge, open to the whole School—there has also been recently established, in memory of Sir Henry Havelock, an exhibition called "the Havelock Exhibition," of the annual value of £20. The subjects for this examination are Latin, French, History (Modern and Ancient), and Geography (definite portions), English Dictation and Mathematics, the latter forming a principal element in the examination. This examination is conducted by special examiners, appointed by the Master of the Hospital and the Head Master of the School. *Cæteris paribus*, a preference is given to a boy intending to enter the army, or some Government office.

For those not on the Foundation there has recently been established, in memory of the late Hon. J. C. Talbot, a Scholarship tenable at any one of the four Universities of Oxford, Cambridge, Dublin, or Durham, an annual Gold Medal, and a prize of books. For these latter rewards all boys who have been two years in the School may compete.

As regards punishments, Mr. Elwyn states as follows: "There is a book in which the name of a boy who has been guilty of any ordinary fault, such as inattention, being late, imperfect, etc., is entered. If the name of a boy appear three times in one week in this book he is flogged; impositions are also given, the mode of marking an offence in ordinary cases being left to the discretion of each Master. Grave moral offences are visited with immediate punishment, as are also serious breaches of discipline. In the case of upper boys, flogging (which is the only corporal punishment employed in the School) is most rarely employed, and their punishment consists in imposition and in degradation from their rank and privileges."

The monitorial system is in operation at the Charter-House; and Mr. Elwyn, in his evidence, attaches much importance to it as a valuable aid in the maintenance of school discipline, as beneficial in creating a sense of responsibility, and as tending to prevent bullying. From the Foundation scholars four are selected by the Head Master, whose duty it is, in turn, to maintain order in school, and also in the house where the Foundation scholars board. In each of the boarding-houses two, or sometimes three, are selected to perform similar duties in the house.

The power of fagging is assigned by the Head Master to the monitors and to others of the sixth and fifth forms, and is exercised over boys below the fourth form, implying the right to exact certain personal services, such as making tea, fetching anything which the senior boy may want, fagging out at cricket (limited to one hour a day), and occasional attendance at foot ball. "No menial service, such as cleaning shoes, etc.," says Mr. Elwyn, "is allowed." It appears, however, that two fags are obliged to look after the fires in the two rooms where the Foundation scholars sit, and to attend to the laboratory, duties both of a menial character, and the former of which, at any rate, entails often, upon small boys, the necessity of carrying heavy coal-scuttles. As regards the time during which fags can be employed, by a recent regulation made by Mr. Elwyn, no fagging is to be allowed between eight and ten in the evening; a certain period is thus secured to the junior boys for the preparation of their lessons, for reading, or amusement. The whole system, however, is a pernicious and vile one, and should be speedily abolished in all the schools. It has never prevailed in this country.

The Head Master is responsible for the management and discipline of the house in which the Foundation scholars are boarded. There is also an Assistant Master in the house, who directly superintends it. The authorizing of other boarding-houses rests with the Governors, who issue regulations for their management, and fix the number to be received in each house, as well as the total number to be permitted to resort to the School.

HOW SHALL WE TEACH GEOGRAPHY?

WHILE great improvements have been made in modes of teaching many of the sciences, Geography has been comparatively neglected. It certainly cannot be from any just sense of its relative importance, that, while mathematics, and the languages, have been taught with the greatest thoroughness, teachers have been contented with the most superficial methods of teaching this subject.

Recently, however, the labors and lectures of one of the most eminent scholars* of the present day, have awakened a desire for something better—some more philosophic methods, and more satisfactory results, in the presentation of the subject of geography in our common schools. The conviction is beginning to be felt that this noblest of sciences has been sadly unappreciated, and that, instead of being a mere catalogue of facts to be committed to memory, it is capable of being made a means of growth to the mind, and of affording the highest exercise of all its powers.

But the question,—how, if this higher view of it be the correct one, is this subject to be presented to the child,—remains as yet unanswered.

It will probably not be questioned that the best possible method of study in any subject is that which, while it shall give the clearest and most perfect knowledge of the subject itself, shall, at the same time, furnish the best facilities for the complete and symmetrical development of the mind.

In order to determine such a method it is necessary to inquire, First, what is the law of the mind's development? Second, what is the nature of the subject to be presented, and what is the general plan of treatment growing out of its nature, and therefore inviolable? Third, by what special methods can this general plan be adapted to the needs of the mind in the several stages of its development?

I. *The Development of the Mind.*—Writers upon its laws and operations declare that though all the faculties of the mature mind exist from the beginning of its life in a greater or less degree of activity, they yet attain their full development at different periods. They come into activity not simultaneously, but successively, the full action of each subsequent class requiring the previous development and activity of the preceding; just as all the capacities of the plant for producing leaf, stem, flower, and fruit, exist in the germ, yet these do not all appear at once, because the higher cannot be developed without the pre-existence of the lower as a basis.

The earliest to attain full activity are the perceptive faculties. These through their agents, the senses, are extremely active in the young child, and constitute the only means by which the images of the external world can enter his mind and give rise to thought. Through their use he is able to obtain a clear conception of the general form and condition of every thing of which they can take cognizance.

In simultaneous action with these is the conceptive power, by means of which the mind grasps and retains the impressions it receives through the perceptive powers; and is able to recall them, and learns to express them. In a higher development the same faculty is able, by means of ideas and conceptions previously acquired, to create images of things of which the perceptive powers have not taken cognizance.

Next to become active is that analytic power of the understanding, by means of which the general conception, which alone could be obtained in the preceding condition of the mind, is separated into its elements, and studied in detail; the knowledge acquired is considered and arranged; and new ideas are derived apart from the exercise of perception, which are expressed in the form of abstract propositions.

Lastly, is developed that action of the reasoning power by which the mind rises to high generalizations, attains the knowledge of general principles and laws, is able to ascertain the causes of phenomena observed, and from known causes to predict results.

We find, therefore, that though all the faculties of the mind act to a certain extent

* Professor Arnold Guyot.

in conjunction, there are yet three successive stages, each characterized by the predominant activity of certain powers, and consequently by a peculiar character of mental operations. In the first, that of the predominance of the perceptive powers, the child is constantly occupied in acquiring knowledge of the external world by the use of these powers, and through the expression of the knowledge so acquired becoming acquainted with language and other conventional signs of ideas, and is therefore becoming able to receive ideas from other minds through the medium of language.

In the second stage, that of the analytical power of the understanding, the knowledge of others, having now become accessible to him, is added to the results of his own more minute investigation, and finally becomes itself the subject of thought, analysis, and classification.

In the third, that of the predominance of the reasoning power, the mind having collected its materials, looks at them from a new point of view, and, from the study of them in their combinations, arrives at a knowledge of their relations, and of the phenomena resulting therefrom, and of the laws which govern their existence and operations.

If, therefore, any method of study is to contribute to the mind's development, it must furnish the appropriate degree of exercise for all these powers, in the order of their successive awakening; and we must distinguish, with Professor Guyot, three natural phases,—the perceptive, the analytic, and the synthetic,—through which the learner in Geography, as, indeed, in every branch of science, must pass before he can obtain a perfect knowledge of the subject of his study.

We may premise, then, as a general principle growing out of the laws of the mind and therefore governing the presentation of all subjects whatever, that the portion of the subject which addresses itself mainly to the powers of perception, and only gives the simplest possible exercise to the powers of the understanding or reasoning powers, is the only one proper to be presented to the very young pupil. This is the *perceptive* phase of his study. It must follow that if a subject present no opportunity for such a phase, it is not an appropriate one for the study of the very young.

Afterward is needed a more minute and detailed investigation which will decidedly tax the earlier powers of the understanding, and which will give to the *analytic* phase its special character.

Lastly, the reasoning powers are mainly addressed; for the facts or phenomena with which the student deals, must be viewed in their mutual relation and combined action. This is the *synthetic* phase.

Subjects which do not present material for all these phases can be profitably studied only in particular stages of the mind's growth, while those in which all are found furnish suitable food for it at every step of its onward progress.

II. *Nature of the subject.*—We come now to the second part of our problem, viz.: to determine the nature of the subject and the general plan of treatment growing out of that nature.

"Geography," in the language of Professor Guyot, "is the *Science of the Globe*, considered, not as a mere aggregation of unrelated parts, but as an *organized whole*, formed of members, each having an individual character and special functions, all mutually dependent and operating together, according to laws established by the Creator, to perform functions possible to no one alone."

If this be the case,—if the globe is to be considered as a magnificent mechanism, prepared by the Creator with a special form, and a special character and arrangement of parts or members, in order to produce a given result,—then the study of it is to be conducted on precisely the same general plan as that of any other individual organization of which we desire to ascertain the conformation, the laws of its operation, and its adaptedness to produce the result intended.

First is required a general view of the whole, in order to ascertain its figure, the parts or members of which it is composed, —their arrangement, not only absolutely in the whole, but relatively or in regard to each other,—their comparative size, and the general conformation of each.

Second.—Each of these individuals is to

be made the subject of special, detailed study, in order to ascertain its particular organization,—the character, arrangement, and relation of its several portions,—the character of the whole individual resulting therefrom,—and finally the phenomena of life associated with it, whether vegetable, animal, or that of man considered both ethnologically and in the social capacity of states or nations.

Third.—Having ascertained the individual character of the several members, we look at them again in combination, in order to ascertain the influence which each by its peculiar character exerts upon the others, thus to determine its function in the whole mechanism and to arrive at a knowledge of the laws which govern the organization of the latter. Then referring to the history of mankind, we trace the operation of those laws on his character and destiny, and ascertain the adaptedness of this wonderful mechanism, to the end for which it was created, the education of the human race.

In the first, we find the perceptive phase of the study, since, by the use of the globe, of *accurate physical maps*, and of good illustrations, it can be presented almost wholly to the perceptive faculties. The second is the analytic, and the third the synthetic phase.

What subject so rich in material for the growth of the mind! What other science furnishes appropriate food, alike to the sunny-haired child of ten summers, and to the grave philosopher, whose head droops with the accumulated knowledge of "three score years and ten!"

III. *Special methods.*—In considering this part of the question we shall confine our attention to the first, or perceptive phase, since, the right stand-point being taken and the right direction given to study, if the final end to be attained be kept in view, there can hardly be, in the subsequent investigation of the subject, any serious departure from the correct course.

It must be borne in mind that we have here to confine ourselves mainly to what the child can, with proper representations, discover for himself. So long as this idea is adhered to, we are in no danger of giving him what is beyond his comprehension. The only caution needed will be, not to go so much into detail as to diminish the prominence of the great characteristic features of the object studied. These must always be kept perfectly distinct.

Whatever appeals are made to the understanding must be exceedingly simple, the reasoning always being based on phenomena which the child has actually observed, and there must not be too many steps, or successive conclusions, between the premises and the final one.

We must be careful, also, to see that, whether in the study of the whole globe or the general view of the individual continents, due prominence is given to such of the points considered, as are characteristic, and become, therefore, the cause of important conditions or phenomena to be afterward studied.

Keeping in mind the nature of the superstructure to be erected, we must so lay the foundation that each successive portion as it rises shall find its support already prepared; and when, at length, the great vault shall be spread, every pier, every pedestal, every column, and every arch, shall be found in its proper position, bearing its appointed share of weight, having its own appropriate decorations and receiving its just meed of honor.

We must first fix the child's attention on the form of the earth, and the distribution of the land-masses and oceans. In this, the globe is the subject of examination, the child being told, that, so far as our knowledge extends, it is an accurate representation of the earth. Henceforth it is to him as though he were examining the earth itself, and he proceeds to the pleasing task of interrogating it, until he has acquired whatever it is able to teach him of itself.

After having noticed and described its form, his attention is to be directed to the position of the lands, they being the fixed body around which the mobile portions arrange themselves. He is to notice the arrangement of the lands in two worlds, of unequal size, on opposite sides of the globe, the compact body of the Old World, and the elongated form of the New,—the massing of all the lands toward the North, and their divergence toward the South in three different bands,—and the consequent con-

verse position and arrangement of the oceans. This is not to be merely a casual notice. The most careful attention is to be given to all these points, because on these forms and arrangements of the land-masses depend those great climatic phenomena which determine the conditions of life on the several continents, and which will, in subsequent study, demand his investigation. We thus furnish him the corner-stone for the temple he is beginning to rear. As these several facts are discovered by the pupil he must invariably be required to state them clearly, in his own language, the teacher only correcting such grammatical errors as he may commit, or supplying such new terms as will enable him to express his idea in a more clear and concise manner.

He next proceeds to notice the breaking, by the sea, of the three bands in which the lands are dispersed toward the South, and the consequent formation of six great masses, which he is told are called continents;—the smaller bodies, here and there, called islands,—the parts of the continents nearly cut off from the main body, called peninsulas,—the three great divisions of the sea lying in basins among the continents, called oceans, &c.

This is to be continued until the pupil has discovered, and is able to describe the different divisions of land and water which appear on the globe, and, wherever it was possible, has found their counterpart in nature. Thus, by the intelligent use of his own eyes, that part of Geography which is usually committed to memory from his text-book, often amid sobs and tears, and which is almost immediately forgotten because, to him, unmeaning, has become an imperishable part of his mind; and the descriptions, instead of being merely a burden to the memory, have been the means of enlarging his power of expressing ideas, and therefore of receiving them from others.

He is now ready to begin his study of the general conformation of the continents. In order to do this he needs the intelligent use of certain terms to express differences in the land-surface of the continents, and in the forms of their internal waters; as mountain-range, plateau, plain, river, lake, etc.

Ideas of these are to be obtained by him by an examination of the natural object, if within reach; or, if not accessible to him, good pictures of these several forms will suffice, and from them he will form his own definitions.

In entering upon the study of the continents it will be necessary to transfer the pupil from the globe to the *physical* map. He has but to be made acquainted with the conventional methods of representing the different varieties of land surface, and internal waters, which he has been studying, and he is ready to conduct his own study of the continent just as he previously did that of the globe.

As many different points will now require notice, it is indispensable that we endeavor to ascertain the logical order in which to present them, that is, the order of their successive dependence. To do this let us select any single point, as that of climate, and inquire by what is it influenced, and what does it control.

The most general influence bearing upon the climate of a continent is the position of the latter on the globe, by which it is exposed to the more or less direct rays of the sun. Next is its contour,—determining the position in which the sea winds strike it,—and the position of its great lines of elevation, whether so as freely to admit these winds, or entirely to shut them out from the main body. The character of the surface also determines the form and distribution of the internal waters, and this in turn modifies the healthfulness of the climate in different portions. The study of these points then, properly, should precede that of the climate, in order that when it is taken up the child may not be obliged to remember the facts concerning it as mere isolated statements, but being led by a simple association of the phenomena with its cause (the philosophic relation, in its full extent, cannot, of course, be given him), he will have it stored in its proper niche, where it will always be found when demanded.

Again, on the soil and the climate depends the general character of the vegetation in different portions of the continent. On the vegetation depends the presence or absence of certain classes of animals which

subsist on vegetation. On the presence in different parts of the continent of such plants or animals as are necessary to his subsistence, depends the existence of man, if in an uncivilized condition; and the differences in the surface, soil, climate, and the distribution of vegetation, animals, and minerals, in the different portions, will necessarily give rise to different industries, different social conditions, and different degrees of advancement in the civilized state; that is, to differences in regard to the possibility of the presence of great nationalities in different portions of the continent.

If evidence is needed in relation to the influence of physical conditions on the industrial pursuits, and distribution of population, we have but to look at our own country.* In the North-east, the rough surface, the somewhat sterile soil, and the cold climate, make agriculture impracticable in the larger part of the country, while the abundant water-power, and the rich stores of coal and iron, make it the great workshop of the nation, and its fine harbors capable of receiving and sheltering the ships of all nations, make it also our commercial depot, nearly all the manufacturing and the foreign commerce of the country being carried on by that little corner north of the Potomac.

Again, the level surface making cultivation easy, the fertile soil, and the warm and moist climate producing a luxuriant vegetation, make the great plains of the interior and the South the nation's farm and garden, from which, were its resources fully developed, supplies might be drawn capable, one might almost say, of feeding the world, and, with the aid of the North-east, of clothing it. In these two regions are gathered almost the entire population of the country.

The great plateau of the Rocky Mountains, on the contrary, doomed, in almost every part, by its saline soil, and its want of moisture, to hopeless sterility, is incapable of supporting a population, and must have remained uninhabited but for the rich mineral treasures embosomed within it. Its population, however numerous it may become, must be mainly confined to the single occupation of mining and will be dependent for daily bread upon the East, or the fertile valleys beyond the Sierra Nevada, which enjoy all the moisture that but for this great barrier would have been dispersed over the whole.

We find, therefore, growing out of the successive dependence, the following order of topics:

1. Position on the Globe.
2. Contour.
3. Surface.
4. Internal Waters.
5. Climate.
6. Vegetation.
7. Animals.
8. Races of People.
9. Distribution, industries, social organization, intellectual condition, and history of the civilized inhabitants.

The last, the distribution of man in the social capacity of states or nations, constitutes that department of the subject called Political Geography, the one which is usually first presented to the young, and, in fact, the only one presented to any extent.

This, it must be conceded, cannot be *intelligently* studied until a knowledge has been acquired of the physical conformation, the soil, the climate, the resulting vegetable, and associated animal life, which make the possibility of the presence of civilized states or nations in one part of the continent while they are absent from another. If the facts concerning their distribution be given the pupil, before he has any idea of these physical conditions which govern it, he may remember them, it is true, but they will be of little worth to him, because he does not receive them intelligently, as the result of causes with which he is familiar, and the influence of which even he can discover if his attention be directed to them,—but they are to him simply isolated facts to be remembered, awakening no thought and stimulating no further study.

We have seen that this topic of political geography belongs properly to the analytical phase of the subject. It must, therefore, be very sparingly presented in the

* See the accompanying map, in which the differences in surface are indicated by difference in color.

perceptive portion. Only the *most prominent facts*, and such as are most *obviously* and *unmistakably traceable* to the great physical characteristics of the continents, can be presented; and even these must be given only *after* the preceding topics are thoroughly known, so that the pupil can himself trace the relation of the former to them.

In this study of the continents, accurate physical maps are *indispensable*, and, if possible, they should be entirely free from all lines or colors indicating arbitrary political divisions, as these can but mar the distinctness, and break the unity of the all-important physical features.

The child must be able to see only the divisions and limits which nature made, if he is to gain a correct idea of her work.

The first topic the child has already considered, in his examination of the globe, and it need simply be recalled. In the next three topics, which constitute the main work of this grade, the same general course is pursued as in studying the globe. That is, the child is to discover, by the use of his own eyes, what exists, and give correct expression to the facts which he discovers.

One very important addition is however to be made. The pupil must invariably construct maps of the country he is studying. When upon the contour, his map will show only the outline; when upon the surface, the mountains and other elevations must be added in their place; and when upon the internal waters, these must appear. In all these exercises the closest accuracy must be required.

There are several reasons why this drawing should be insisted on. First, it aids, by the closer and more minute observation required than is necessary to a simple description, to fix the physical features in the memory. Second, it affords a variety of exercise by means of which the attention can without weariness be kept on these all-important points for a greater length of time. Third, it cultivates a power of representation which will be invaluable to the pupil in future study; and lastly, at no after period in his life can he so easily acquire facility in this representation as now, and be so easily interested in the many little details which are necessary to accuracy. He takes delight in examining the minute peculiarities of contour and relative position; and what the older pupil would neglect as unimportant and wearily stupid, the child of nine years considers worthy of the greatest attention and the most prolonged effort.

In studying the internal waters and the succeeding points, the reason begins to be a little exercised in noticing the relations of the one to the other, and of all to the surface. Great care should be taken, however, to present only the most simple and obvious of these relations, such as the pupil of ordinary capacity cannot fail to comprehend. For instance, the child is thoroughly acquainted with the surface of North America. He knows of the great plateau in the western part of the United States, and of the high, unbroken wall of the Sierra Nevada, which borders it. He is told that the Pacific coasts and valleys have a fine warm climate while the upper part of this great wall is very cold. He sees by the rivers that on the side toward the sea there must be abundant rains, while the other side is almost destitute of water.

He has noticed many times in his mother's kitchen that vapor rises from water abundantly when it is warmed, and that when this vapor comes in contact with the cold window-pane it is at once changed into water. Now if he is told that winds are constantly blowing on this part of the continent from the warm Pacific, will he not, if that simple phenomena be recalled to his attention, at once see that the moisture which these winds bring from the ocean will be taken from them when they strike the cold Sierra Nevada, and will fall in abundant rains on the outer slope, while the inner receives little or none? Remembering then the position of the mountain wall, can he ever forget these peculiarities of climate? Again, he has learned by experience in his garden that plants require, in order to their growth, both warmth and moisture. Knowing these differences in climate, will he fail to remember the differences in vegetation which he himself will discover depend on that? He knows, also, that there are certain occupations, as agriculture and grazing, which depend on

the growth of plants. He will therefore be prepared to find that the one part is eminently fitted for these occupations, and the other either not at all so, or to a very limited extent. He thus gets his first insight, a very limited one it is true, into the relations of the physical conformation of a region to its fitness to be the dwelling-place of man. We find, therefore, as before stated, the necessity that he should first be made thoroughly acquainted with these forms. If this is done, it will become impossible for him to forget the subsequent facts, which he sees to be so intimately dependent upon them.

We are aware that the ideas here advanced are diametrically opposed to the generally received notions as to the proper presentation of this subject to the young, and that if acted upon, they must produce an entire revolution in our methods of teaching Geography.

We trust it has been made evident to the reader that, if we are to proceed on philosophic principles, the old plan of giving the pupil long lists of names, and collections of facts in regard to political geography, as his first work in this subject, must be set aside, and he must, in the outset, be introduced to the globe in its physical conformation and conditions.

Years of experience have convinced the writer that if the general plan here indicated be pursued, we shall no longer hear the complaint so often made by teachers that the children do not learn their geography lessons; are not interested in them, and do not remember them.

The text-book so often disliked and neglected by the pupil, will become (if properly arranged) but the summary of his own thoughts, a convenient memorandum of facts and relations, most of which he has himself discovered, to which he will always turn with interest and pleasure. The few details given in regard to such points as are beyond the range of his investigation, will, as he finds them in their relation to such points as he could investigate, confirming the justness of his own conclusions, be perused with never-wearying delight.

When the general course here indicated has been pursued in each of the six continents, and a general view is had of the conformation of the oceans, the main work of the perceptive course is done. The child is now thoroughly prepared to enter upon the analytic course in which he is no longer confined mainly to the study of general forms, but the detailed modifications of these forms are carefully considered, and a great store of facts acquired in regard to the life of the vegetation, animals, man and nations associated with them, and he is constantly employing his reasoning powers to trace the relation of these facts to the physical conditions with which they are associated.

THE MAGNET.

THE remarkable power of the magnet to attract small pieces of iron, was recognized as a wonderful natural phenomenon for centuries before the Christian era; and the development of this power to a more extended usefulness to mankind has been an object earnestly sought for in all ages. Already it has been applied to uses which have spread manifold blessings to mankind; and every invention in magnetism is one more step towards the full development of the treasures which are still held within its iron grasp.

The natural magnet is a metallic body capable of attracting iron and other metals. The power of attracting iron was first observed, by the ancients, in an iron ore obtained from Magnesia, in Lydia, from which circumstance it is supposed the term Magnetism is derived. More recently the ore was called load-stone, or leading-stone. Great quantities of this mineral were formerly found in India and Ethiopia, and it is now found in great abundance in China, in the iron mines of Sweden, and in this country. Tiger Island, at the mouth of the Canton river in China, is composed almost entirely of this mineral; and so great is the magnetic power of this island that it affects the magnetic compasses of passing

navigators. Magnetic iron ore is found in large quantities in New Jersey.

The ancients believed the load-stone to be of two species, male and female. It was used medicinally in the middle ages; and even in modern times "magnetic" salves and plasters are advertised and sold. The ancient Greeks believed that the discovery of the magnet was accidentally made by one Magnes, a shepherd, while leading his flocks to Mount Ida. Stretching himself upon the green sward, to take repose, he left his crook, the upper part of which was made of iron, leaning against a large stone. When he awoke and arose to depart, he attempted to take up his crook, when, to his surprise, he found that the iron firmly adhered to the stone. He imparted this fact to some philosophers of the day, and they called the stone after the name of the shepherd, Magnes, the *Magnet*, which it retains to the present day. Among many nations, however, it is named the *love-stone*, from its apparent affection for iron. The Chinese have a tradition of a Magnetic Mountain, rising in the midst of the sea. The power of this immense load-stone is so great that the nails and iron fastenings of passing ships are drawn from their places with great violence, and the ship falls to pieces. Not only does this tradition exist in China, but it is very generally known throughout the various people and tribes of Asia. The Chinese historians locate this magnetic mountain in Tchang-hai, the southern sea, between Tunkin and Cochin China, which is precisely the same geographical region designated by the author of Sinbad the Sailor, in his description of the wonderful load-stone, discovered in one of the marvellous voyages of his hero. This curious fact confirms the oriental origin of a great number of the half true, half fictitious tales which are so universally diffused through the literature of all languages, as to seem to belong to each of them.

Magnetic and electric forces are so intimately allied, that it is nearly impossible to consider the operations of either separately. The fact that amber, when rubbed, acquires the property of temporarily attracting light objects, was familiar to the philosophers of ancient Greece. The foundation of electrical science, however, was laid by Gilbert, about 260 years ago; and the first electrical machines were contrived by Otto de Guericker and Hauksbee. It had likewise frequently been noticed by nautical men, that after a ship had been struck by lightning, the compass was deranged, or its poles were reversed; but the true connection between magnetism and electricity was not made clearly apparent until the year 1819, when Oersted published his memorable discovery, that a magnetic needle hung freely at its centre, would assume a position at right angles to a wire transmitting a current of electricity. The means of producing powerful temporary magnets, by passing currents of electricity through wires coiled around masses of soft iron, were speedily devised. The method of preparing electro-magnets was discovered, and the dependence of magnetism on electricity in motion, was shown. This great chain of discovery was completed in 1831, by Farraday, who announced that a current of electricity might be obtained in a closed conducting wire from the magnet by moving it across the the face of the conductor.

It will be remembered that last month we noticed an important invention by which globes were magnetized, and to their surfaces magnetic objects, representing the races of men, animals, light-houses, etc., with profiles by Guyot, marking the relative elevation of surfaces, were attached at will, thus making a great improvement in teaching geography. The magnets on which these objects are mounted, possess a greater proportion of attractive force than larger magnets. This property is found to exist both in natural and artificial magnets. The magnet worn by Sir Isaac Newton, in his ring, weighed only three grains, while it was able to sustain seven hundred and forty-six times its own weight; but magnets weighing above two pounds seldom lift more than five or six times their own weight. We are not aware that this has ever been clearly explained. Indeed, numerous phenomena connected with magnetism are as yet without satisfactory elucidation, and are waiting for the discovery of facts in other departments of study which in turn will bear upon them.

THE ENGLISH LANGUAGE BEFORE CHAUCER.

AN interesting paper upon this subject was read before the London College of Preceptors recently, by its author, Mr. Morris. The lecturer, after treating upon the importance of a systematic study of languages, how it developed and disciplined the mental faculties, and produced clearness of thought and facility of expression, true to his early teachings, assigned the highest place to the Greek and Latin. Admitting the English, for the same purpose, to the highest place among modern languages, he considered a study of its various phases to be a duty as well as an advantage. He remarked, that in spite of its many changes, in all its various forms, it is still the English language, whether we study it in the works of Cædman, Alfred, Layamon, Chaucer, or Orme. The technical terms Anglo-Saxon, Semi-Saxon, Early English, etc., are highly useful, inasmuch as they serve to mark distinctly great historical periods. It is to the Anglo-Saxon, to English, in its most primitive form, that we must turn, if we would rightly understand such grammatical inflections as are still preserved, if we would possess a more intimate knowledge of the meanings of words than is to be obtained from grammars and dictionaries.

It is often taken for granted that we have been gainers by the introduction of the Romance element into our language. It has been assumed, too, that in the older stages of the language there was a paucity of words, a great lack of terms fully adequate to the expression of all our ideas. This is a very erroneous notion of the capacity and capabilities of our mother tongue. Sharon Turner has shown that the Anglo-Saxon possesses a power of derivation and extension not at all inferior to that seen in the languages of Greece and Rome.

Thus, to take our English word *mood*. In Anglo-Saxon it is *mod*. From it we have the word *modian*, to be angry; the adjective *modig*, irritable, proud, equal to the modern word *moody; modful*, full of mind, irritable; *modga*, elated; *modwhata*, fervid, zealous; *modilic*, magnanimous; *modleas*, pusillanimous; *modstathal*, firm-minded; *modthwer*, meek-minded. As secondary nouns, we have *mod-gethane*, thoughts of the mind; *mod-gewinne*, conflicts of mind, reasoning, etc.

Next take *wit* (*ge-wit*), mind, genius, sense, intellect, wisdom. Compare the phrases, "Out of one's wits," "the five *wits* (senses)." *Wita*, wise, skillful; *witan*, to know, perceive = our "to wit;" *gewitan*, to understand; *witegian*, to prophesy; *wittig*, wise, skilled = our "witty;" *gewitig*, knowing; *gewitleas*, ignorant, foolish = "witless;" *gewitseoc*, sick in mind, demoniac; *witol*, wise (hence the old English *witter*, wise; *witful*, intelligent; *wytter*, to inform); *witedom*, prediction; *witega*, prophet; *witegung*, prophecy; *witesaga*, a prophet; *gewitleast*, folly; *gewitnesse*, witness; *witsord*, the answer of the wise; *gewitseocnesse*, insanity; *witolnesse*, *witedomlic*, prophetical; *witendlice*, knowingly, "wittingly."

Not only in Anglo-Saxon do we find this fulness in the vocabulary, but also in later periods of the language, when it had been influenced by Norman-French. Thus, in works of the fourteenth century, we find *aboutstanding*, circumstance; *bochouse*, library; *bodworde*, message; *brethe* (breath), vapors, steam; *fore-speech*, preface; *fus*, diligent; *ingoing*, commencement; *medeful*, meritorious; *overdoing*, excess; *overweening*, presumption; *spedful*, prosperous; *sty*, ascend—hence, *stair*, *stirrup*, *stile*, etc.; *ugly*, horrid (from *ugg*, to fear, terrify, and hence *huge*); *unlered*, ignorant; *workful*, active; *wytful*, intelligent, etc.

In our old writers of the fourteenth century we find no lack of expressive terms. It was rich, too, in synonymous words. In an old English work, written about A. D. 1320–1330, we find no less than eleven words for *man*. Among them we have *knape* and *schalk*, still surviving in *knave* and mar-*shal*.

Many of our most common words are not easily explained without reference to their older forms. Thus, to take the word *spell*, to name the elements composing a word. How is it connected with *spell*, a

charm? The Anglo-Saxon *spellian*, to proclaim, tell, explains the meaning and connexion of both.

A preacher in ancient times would be described as a beadle, *spelling* from a steeple. *Beadle* originally signified a messenger, and was equally applicable to an angel or to a man.

Aloft is connected with old English *lift* or *loft*, the firmament. *Loom* originally meant an instrument of any kind. It was applied to a sword and a club, which were called play *looms*. The ark, in old writers, is frequently called a *loom* (and even a *hutch*); subsequently the word *loom* designated the most important of ancient domestic furniture, which became handed down from father to son. Hence we can easily explain its meaning in heir-*loom*. *Tool*, in the same way, stood for a sword, which would be called a *grim tool*.

Sly and *sleight* are instructive words. In old English, *sly* (*sleghe*) signifies *wise*, and *slight* (sleight) = wisdom. They are connected with the German *schlecht*, bad, which originally meant wise, good, etc.

The lecturer showed that the word *time*, in the expression "I have no *time*," was not the ordinary word *time* (Latin *tempus*), but represented the Latin *otium*. In old English it was written *tome*, and not only signified leisure, but *empty*, like the Scotch *toom*. *Empty* originally signified *leisure*.

Callow, as applied to unfledged birds = Anglo-Saxon *calo*, bald. In Kent a bat is called a *callow*-mouse. A house exposed to bleak winds is said to lie *callow*. In an old poem of the fourteenth century, containing the life of St. Dunstan, we are told that the saint seized the devil by the nose with his hot tongs; the pain sent the fiend flying through the air, exclaiming, "What hath the *callow* (*calewe*) done! what hath the *callow* done!" *i. e.*, "what has the bald pate done!"

We must not expect to get a full and satisfactory account of English words from Etymological Dictionaries, or select Glossaries, which are all exceedingly useful as works of reference. We must go for the sources of information to our old writers themselves, in whom we may place implicit trust.

The intention of the lecturer was not so much to dwell upon the origin and history of words, as upon the early English dialects.

In the fourteenth century (and, of course, long before), Englishmen wrote books for the instruction of the *lewd* in the dialect which prevailed in their own locality. All our early works have thus a provincial cast. The English of the North differed from the English of the South, and Midland English from both. But old English authors, no matter what dialect they employed, thought themselves justly entitled to call it *English*. Even Scotch writers knew no other term for their good old tongue. Whatever may have been the varieties of the *old* provincial dialects prevailing in the fourteenth century, they were all called English, and each had something to do in the formation of our language as it has come down to us at the present time.

By the help of a map the lecturer showed the geographical distribution of the old English dialects—the Northumbrian, the Southern, the Midland, together with its varieties, the East and West Midland forms of speech. Some curious points of difference between the Northern and Southern dialects were remarked upon. The Northern dialect preferred the *k* sound to that of *ch*. Hence the double forms, *dike* and *ditch*, *kirk* and *church*, *churl* and the Scotch *carl*, *crook* and *crutch*, *sack* and *satchel* (a little sack originally), *wed-lock* (or *wed-layk*, or *wed-lak*), and *know-ledge* (or *know-lach*); the *-lock* and the *-ledge* being the *hard* and *soft* forms of the old English *-lac* or *-layk*. Many grammatical peculiarities were alluded to and explained.

1. The *n* in "for the *nonce*," was shown to be a part of the article; the old form being "for *than anes*."

2. *That*, now a demonstrative pronoun, was, as late as 1350, the neuter of the definite article in the Southern dialect.

3. The word *day*, in the phrase "rested the seventh *day*," etc., was clearly shown to be the *accusative*. In the thirteenth century the phrase would be written, "restede *thane* seventh day," etc., *than* being the accusative of the article definite.

4. The double forms *tithe* and *tenth* were explained. The Southern numerals *seventh*, etc., of the fourteenth century, ended,

as in Anglo-Saxon, in *-the*, no *n* appearing in them. The Northern ones, borrowed from the Danish, ended in *na;* thus the Southern *tithe* would be written *tend.* The Midland dialects at first used the Southern forms, but ultimately adopted the Northern terms, changing the *d* to *th.* saying, *seventh*, *ninth*, instead of *seveth* or *sevend*, *nithe* or *neghend* or *nind.*

5. The pronominal forms, *I*, *she*, *they*, *their*, *them*, *ours*, *yours*, etc., were examined, and shown to have been originally confined to the Northern dialect.

6. Many peculiarities of our verbal inflexions were noticed and explained, such as the *s* and *eth*, in the third person singular indicative. The double forms *spake* and *spoke;* the presence of *n* in *given* and *stolen*, and its absence in *found*, *run*, etc., originally *founden*, *runnen*, etc., were examined.

The comments made by leading minds among the listeners to Mr. Morris's essay, were generally favorable. Among these, Professor Heimann said that not a few of the lecturer's explanations of difficult English words threw a light on obscure terms in the German language. There could, indeed, be no doubt that a careful study of the earlier forms of the various English dialects would yield a rich philological harvest, and enable us to understand thoroughly many points of syntax, as well as of mere etymology, which have hitherto been the opprobria of both English and German grammarians.

Another gentleman (Mr. Watson) suggested that Mr. Morris would, on some future occasion, favor the members of the college with another lecture, devoted to the comparison of antique principles of construction with the corresponding modern rules. He believed that in this way many apparent anomalies would be shown to be perfectly regular; and that satisfactory reasons would thus be discovered for not a few peculiarities of our language which are commonly supposed to be inexplicable. Mr. Watson said that he had himself paid some attention to the Scandinavian dialects; and was convinced that an accurate study of them would furnish valuable materials for the illustration and elucidation of the older forms of our own language, and, through them, of modern English.

Mr. Robson said that, interesting as were the illustrative details of Mr. Morris's admirable lecture, its chief merit, in his opinion, was that it showed the true, the rational principles on which the study of language should be conducted. Language being not a purely scientific device, but an instrument for the expression of popular thought and feeling, as well as of the ideas and conceptions of learned men, and being subject to constant change and extension, must be studied historically, if we wished to possess more than a superficial knowledge of it; and such a study demonstrated the unsoundness of the notion, still far too prevalent, that language is, to a great extent, arbitrary and accidental. This mistaken view was incompatible with accurate or useful philology; and hence whatever tended to weaken the influence of the former, must promote the spread of the latter. For this reason especially the labors of such men as Mr. Morris, in the field of our oldest native literature, were extremely valuable, and deserving of every encouragement; and the speaker expressed his hope that they would be persevered in until every portion of that field had been thoroughly explored.

The chairman, Dr. Hodgson, said that, fully concurring with Mr. Robson in his high estimate of the value of the Lecture with which they had that evening been favored, he could not allow the discussion to close without making a few remarks on one or two points on which he did not altogether agree with Mr. Morris. The lecturer had, he thought, carried too far the analogy between the growth of language and of an animal. So far as their origin and development were concerned, the two things might fairly enough be compared; but Dr. Hodgson could not admit that languages, like animals, must necessarily suffer decay and extinction. Many languages may, no doubt, be pointed at as illustrations of such a destiny: Latin and Greek are *dead* languages; but he saw no reason for supposing that English, French, and other cultivated modern languages will ever cease to be living vehicles of thought. The speaker said that he must also dissent from Mr. Morris's

statement that the classical languages are the most perfect that have ever existed. Such a doctrine, sanctioned though it is by the general voice of scholars, is at variance with the great law of human progress, which must surely apply to language, the principal medium for the expression of thought and feeling. Leaving these general considerations, Dr. Hodgson proceeded to comment on some of the details of the Lecture. Mr. Morris had mentioned that the terms Scotch and English were, in early literature, often confounded; and the map which illustrates his Lecture accounted for this, by showing that Northumbria included the greater part of the lowlands of Scotland; so that, in fact, the distinction between English and Scotch, in the modern sense of the terms, did not then exist. The dialect which is now popularly called Scotch, is nothing more than the remains of old English. It had for some time been known that our grammarians were entirely wrong in the account they have given of the article *a* and *an;* and the examples of this word quoted by Mr. Morris rendered this somewhat important point indisputable. A precisely similar case was that of the Greek αν, which sometimes assumes the form α. The whole paper displayed a masterly grasp of details, such as only a knowledge of principles could confer.

RUDIMENTAL MUSIC;

WITH A NOTICE OF SOME ERRORS IN TEACHING IT.

III.

THERE is a chromatic prefix, ♯, called a Sharp, placed exactly on the same line or space which the note affected by it occupies. This sharp indicates that the note after it does no longer correspond with the usual key, but with the one immediately adjoining it above, or short: the sharp makes a note one key higher.

The Flat, ♭, is a chromatic prefix making a note one key lower.

The Natural, ♮, is the third chromatic prefix, occurring only after a note has been sharped, which note is to represent again the usual key.

The origin of these terms I cannot divine, but I especially protest against the term "natural," since sharps and flats are as natural in music as naturals can possibly be. Some have proposed "neutralizing sign." I think any other reasonable term is better.

Double flats, 𝄫, make a note two keys lower.

Double sharps, 𝄪, make a note two keys higher.

The double sharp is reduced to the power of a single sharp by ♮♯, and the double flat to the power of a single flat by ♮♭.

These prefixes affect not only the note or notes before which they are written, but also their octaves in most cases. But when they are written in front of each staff, they are called *Chromatic Signatures*, and not only affect like the others the note and its octave in one measure, but throughout the piece, unless a new chromatic signature should be introduced.

It is wrong to leave beginners under the impression that sharped or flatted notes represent the short or black keys. Neither *e* sharp and *b* sharp, nor *c* flat and *f* flat, are short keys.

It is also wrong to call those prefixes, written immediately before the notes, "accidentals." They are no more accidentals than those in the signature. There is nothing in music deserving the epithet "accidental," except mistakes; all else is there on purpose, and not by accident.

The most important defects found in Instruction-books for the Piano are the following:

1. *A want of exercises to render both hands independent of each other.*—The habits acquired and constantly encouraged by the daily occupations of the hands and

fingers, create a powerful sympathy between them, which ought to be as constantly counteracted by numerous and appropriate exercises. But such exercises are either very scarce or entirely omitted. It is true, the efficient and experienced teacher will know how to turn any exercise to this and various other uses, but an efficient teacher will use none of the Instruction-books now extant, for he teaches his pupils to compose their own exercises. He who really needs an Instruction-book, the inefficient, the inexperienced teacher, is overlooked, uncared for.

2. *A want of exercises for "legato" and "staccato" playing.*—In most Instruction-books this subject is spoken of *en passant*, but no attention is paid to it in the exercises. Considering what was said above, viz., that only inefficient teachers need Instruction-books, it is a serious defect.

3. *A want of exercises for the use of the pedals.*—This is a subject scarcely attended to in the best Instruction-books, nor does it seem to be much attended to by teachers in general. The abuse of the Pedals arises, however, principally from the names usually given to them. What does "loud or strong" Pedal mean but that the Pedal is to be used when the player wishes to play "loud or strong?" Were they called Right, Middle, and Left Pedal, the pupil would stop and think or inquire, What is their use?

4. *A want of dynamic exercises.*—A few of these exercises are deemed sufficient by authors of Instruction-books. I agree with them, when the pupil has an efficient teacher,—if he has not, several hundred of such exercises are hardly sufficient.

5. *A want of exercises in the different keys.*—The so called five-finger exercises are written exclusively in the key of C. Authors will say, the efficient teacher will transpose these into the other keys: but if he has to do this, would it not be as well for him to write an Instruction-book at once for his use?

6. *Too much science is crammed into Instruction-books.*—The study of the Science of music is a matter quite different from learning to read music. We all used to learn to speak and read before we studied Grammar, and we, when we were children, would have been greatly puzzled, if our mothers had then told us, while learning to call a certain animal "ox," that it is a noun, masculine gender, and its plural is "oxen." Let authors and teachers avoid every technical term not indispensable, and every term positively necessary for elementary instruction should be plain English, not Italian, German, or French. It is time enough for a pupil to study the Science of music when he can read at sight, and write at least from memory or dictation.

A science consists simply of technical terms, with their definitions systematically arranged, and principles proved by facts, a knowledge of which was previously acquired by elementary study. This shows what elementary instruction has to give to the pupil.

7. *A want of a proper exposition of the rules for fingering.*—Beyond a half dozen (more or less) of general rules for proper fingering, both the teacher and scholar are left in the dark as to the acquisition of a correct fingering. Not a single author, to my knowledge, has said more on this subject, nor was it even hinted at, that the exercises contain the rules for fingering. On the other hand, authors and teachers have been endeavoring to compensate for this deficiency by writing the proper fingering above the notes of every exercise, study, or piece of music intended for beginners. This, it must be admitted, accomplishes its object as far as each exercise, study, or piece, and also as far as the teacher's indolence and the scholar's ignorance are concerned, for it saves a great deal of thinking and talking about rules, and renders exercises nearly useless.

8. *The improper selection of pieces of music and studies.*—That this is a subject for just complaint, authors are silently admitting, for some of our so-called standard Piano Instruction-books can be bought with or without the selection, abridged or unabridged. Pieces or studies can be selected for the pupil only by his teacher. There are so many considerations by which a teacher selects (the scholar's talents, time for practice, ability, age, application, taste, etc.), that it seems impossible for any one else to select by mere progress.

9. *The total omission of a method to*

teach the pupil to write music from dictation and memory.—There is no exercise better calculated to improve both the beginner and advanced scholar in reading at sight, than this branch of rudimental music, but this is not the only advantage drawn from it. A player who is able to write music, is also properly prepared to study the science of his art, and that great bugbear "playing by ear," if a pupil indulges at all in it, is turned into its proper channel, for if the pupil learns to write music, he is so much better able both to write and to play by ear—correctly. But since writing cannot be taught without a sufficient skill in Vocal Music, I consider:

10. *The Defect of Piano Instruction-books.*—How teachers can teach songs with piano accompaniments, without previously instructing their scholars in vocal music, has always been a mystery to me, and still, I know, it is done by teachers acknowledged to be superior. It certainly must be a laborious and thankless task, to say nothing of the neglect of the educational principle, that nothing should be taught mechanically. Why not teach singing and playing the Piano simultaneously? or, if teachers do not know how to do this, then in alternate lessons?

11. *The want of a method to teach transposing a piece of music into other keys.*—The ability thus to "transpose" is especially necessary for singers when songs are not published for their compass of voice, and for score players and others who wish to accompany instruments not in tune with the Piano.

12. *Instruction-books are any thing but complimentary to a good music teacher.*—Read them from beginning to end, and we find that a music teacher is to know positively nothing of his business. Every thing he has to say or to explain, he finds there stereotyped. As the author has in many cases piously repeated what his predecessors from time immemorial have said, so also the teacher is expected to repeat to his scholars all that learning and all those incongruities in exactly the same terms. Not only the fingering for every note is conscientiously marked above or below it, but marks are made everywhere to arrest the scholar's attention (probably because the teacher is imagined to be an ignoramus or asleep) whenever he (the scholar) is thought to be in danger of making a mistake, and learned explanations fill the margins. For indolent and ignorant teachers, this is an excellent plan, but for an efficient teacher—if he does not feel like throwing such an Instruction-book out of the window, it is simply because he does not see the insult offered him, or because the book is not his own.

The case would be different, if authors would confine themselves to writing Instruction-books for beginners in the art and science of teaching music, or for such teachers as wish to improve themselves in their profession, or for those who wish to learn to play the Piano without a master, if there should be any foolish enough to consider this a possibility; or to writing elementary exercises similar to those of Czerny, Herz, Knorr, etc., or reading lessons and studies similar to those of Czerny, Herz, Burgmüller, Abt, etc. (but by all means without fingering), thereby assisting the good teacher and depriving the indolent and ignorant one of the chance of imposing on the public.

The demands I make for a good and complete Instruction-book for the Piano are, I know, so numerous and extensive, that it would give it a size so large as to make it unwieldy. But I do not demand Instruction-books for scholars. A scholar has in his teacher all the instruction-books he needs. Whatever he needs, his teacher will give him in exactly such terms and words as he will understand, and whatever printed matter is required, his teacher will select. It is, therefore, of the utmost necessity that the teacher be well informed and initiated into all the difficulties of his profession, hence that authors should write for teachers, not for scholars or for both in one book.

[The foregoing paper, the production of a thorough musician and skillful teacher, will commend itself by the soundness of its views, not merely to professors, but to lay readers who have children or wards to be taught. If there be those who dissent from its positions, which, in the main we endorse, we would be glad to hear from them.—EDITOR.]

THE NEW DICTIONARY.

THERE is a story about a fish vendor, who having boasted that she had a cousin who was a baluster at law, was put down by a rival, who claimed to be near akin to a corridor in the navy. The precedence of an entire corridor over a single baluster was not to be denied. The slight change by which the barrister and commodore were given a wooden character, was owing to a scarcity of dictionaries in that quarter. There is no excuse for the blunders of Dogberry and Mrs. Malaprop in these days. Dictionaries abound. They are losing their old character. A "royal quarto, unabridged," is becoming a piece of household furniture, as necessary as a sewing-machine, or that admirable contrivance, as yet unpatented, by which your true resident of remote rural districts extracts the secret purposes and hidden business from an unsuspecting traveller.

With all this abundance of authority and convenience of reference, there are many who doubt whether we have a dictionary among us. These be your irreverent literary Pagans, who profane the name of Webster, are infidels to Worcester, and deniers of the faith in Richardson. Their skepticism arises not so much from their own nature, as from the absence of a settled authority; and the absence of settled authority comes in a measure from the nature of our language itself.

There is no trouble about this matter in France. The true shape, pronunciation, office, and meaning of a word, are there prescribed by the powers that be. There is a general council of the Church Literary from whose decree there lies no appeal. There exists a French Academy, composed of those eminent in letters; and these are the word-wardens of the realm. Any vagabond word caught within the confines of the empire, is brought before this literary tribunal. If it be found to be an honest word, reputable and well-formed, to the manner born, or fit for naturalization, it receives a certificate of respectability which admits it at once into good society. If not, the unhappy new-comer is sent to Coventry, or the kingdom of Slang, and only ventures, if he ever return, to move through by-places and alleys, or sneak into an obscure newspaper paragraph.

We have no such authority in the United States, nor are our cousins on the other side of the water better provided in that respect than we. It would be an impossibility. The nature of our language, however purists may protest, forbids it. The English tongue is composite—made up of words stolen from every language and dialect under the sun, grafted upon a Saxon stock; and its mixed origin makes it welcome every stranger that promises to be useful. Not content with voluntary emigration, it even kidnaps its victims, and afterwards exalts them to fellowship. Under these circumstances, general usage by the refined, or the endorsement of those eminent in letters, fix the position, and settle the meaning of words in our language. In either case, however, the dictionary is the mere register of authority. It is not the business of the lexicographer to settle what is proper or improper; but to inform the public what has been fixed on, by the competent power—in France, what the Academy has determined to be French, with the additions admitted by polite society; in England and the United States, what custom and the admitted masters of the language have decided to be English. When he goes beyond this, he usurps powers, and scholars will not submit to it. He must abandon his claims, or be dethroned.

The first dictionary of any note devoted solely to the English language, was that of Bailey, remarkable for the admission of words which are now disused by any but the most depraved. This merely paved the way for the more thorough work of Dr. Johnson, that appeared about thirty years after. The dictionaries of Buchanan and Peyton followed; and, in 1764, Joseph Nicoll Scott produced a revised edition of Bailey. The same year the works of Farrar, Johnston, and Entick appeared,—the latter being considered the most scholarly,—and from that time down to 1791, fourteen more dictionaries entered the field,

including those of Barclay, Ash, Perry, Sheridan, and Nares. None of these displaced Johnson. At length, in 1791, John Walker produced his "Critical Pronouncing Dictionary," which was at once accepted as standard authority in pronunciation, and its orthography generally acquiesced in. Other dictionaries, many of them mere alterations of Johnson or Walker, appeared from time to time, but none of these had particular merit, except that of Richardson, which, as an Etymological Dictionary, is without a peer, and is a necessary part of the library of the scholar.

It was reserved for the United States to bring forth a more copious and thorough lexicon than had appeared in England. In 1806, was first published, "The Compendious Dictionary of the English Language," by Noah Webster, which, in 1828, assumed a more perfect shape. The bold innovations proposed in the spelling and sound of words by the daring new-comer; his contemptuous disregard of the usages of the learned; and the industry and care displayed in the work as a whole, excited attention and controversy. Although the innovations met with no approbation among the scholarly, the work itself divided public favor generally, and prevailed in some sections over Walker, and remained in use, with little alteration, until 1847. A year previous to that, Dr. Worcester produced his "Universal and Critical Dictionary of the English Language." Following in its spelling and pronunciation the usage of the best scholars, and displaying learning and industry, it attracted attention and favor, and the publishers of Webster—the author being dead—obtained the services of Dr. Goodrich to revise and enlarge their work. The task was well done, and the rivalry between the two dictionaries heightened, until the appearance of the enlarged edition of Worcester, in 1859, caused a fierce war between the partisans of the respective publications. In this controversy, the Websterians had rather the weaker side. The result was, a determination on the part of the latter, to produce a work which should be the *ne plus ultra* of all dictionaries. Some of the ablest scholars of New England were pressed into service; their labors extended over several years; and the result of all this lies upon our table.[1]

To appreciate the merits and demerits of this new issue we must compare it with another; and that other, for evident reasons, must be Worcester.[2] It may seem unfair to the latter, for that book is older, and the new edition, if such there be in prospect, has not appeared; but we are obliged to take things as they are. To carry our comparison in detail through the whole of both works would occupy too much space. So far as the dictionary proper is concerned, a single letter will answer our purpose, and as the centre of a book is as good a place to dip in as any other, we will hastily glance over the list of words commencing with M.

The first thing that strikes us is the typographical appearance. This is decidedly in favor of Webster. In that work, the type for the words defined is lower-case, instead of the capitals used by Worcester, is bolder-faced than the rest, and exceedingly sharp and clear. The engravings introduced through the work—for Webster has followed the plan of Worcester in this respect—are better executed, as a general thing, though at times unnecessary.

In looking at the vocabulary, we find that M, or *em*, the unit of measurement in computing the amount of type in any given space, is omitted entirely by Worcester, although he admits other technicalities. Webster, however, omits *magazining*, for which he deserves credit. Had he also omitted *magaziner*, he would have deserved more. Worcester omits *Mahound* and *Macassar-oil*. Webster admits both, and appends to the latter the information that the oil was formerly obtained from Macassar, a district in the island of Celebes.(!) Both dictionaries omit *mitre-saw* among the compound words, although they give *mitre-box;* and they both ignore *mustafina* and *mestafina*, while they give *mustee* and *mestee*.

There is little, if any, difference in the

(1) The American Dictionary of the English Language. By Noah Webster, LL. D. Thoroughly Revised, and greatly enlarged and improved. By Chauncey A. Goodrich, D. D., LL. D., and Noah Porter, M. D. Springfield, Mass.: G. & C. Merriam. Quarto, pp. lxxii–1768.

(2) A Dictionary of the English Language. By Joseph E. Worcester, LL. D. Boston: Brewer & Tileston, Quarto, pp. lviii–1786.

orthography, except that Webster transposes the *e* and *r* in *metre*, retaining the standard spelling as alternative; while Worcester follows the orthodox mode solely. In pronunciation, we note nothing particular except in the word *Magyar*, the first *a* in which Worcester pronounces like the short English letter, and the second like the *a* in *far*—an error which is gross and inexcusable. In the definitions, there is little difference, and when it exists the advantage is about even. Webster gives the meaning in the best way to *macadam-road* and to *maiden* (second definition), while the words with which Worcester defines *marble* and *missile* are preferable.

And now let us look at some of the peculiar faults of each of the two.

Under the head of *Marquess* and *Marquis*, both books are in error. Webster endorses *Marquis* as the English spelling, and quotes Smart, who says, that, "till of late, *marquis* was the usual spelling, but it is now to a great extent superseded by *marquess*, except in the foreign title." Worcester does the same, but rather inclines to *marquess*. The truth is, that the latter is the correct spelling, and the termination *quis* came into use in England during a period when Gallicism was a prevailing affectation. The original patent for the title, conferred by the second Richard on the Earl of Oxford, was "Marquess;" and the best scholars in England retained it through all the mutations of fashion. There is a wide distinction between the English and French titles, and there should be no question concerning the distinctive orthography of each.

Again, *may-apple* is defined by Worcester as "a plant with poisonous, drastic roots," and Webster, who gives a better definition, adds, "the leaves and root are employed in medicine, and are dangerously drastic." There is nothing definite in these. They remind us of the proposed French definition of *crab*—"a fish, of a red color, which swims backward." Submitted to Cuvier, he admitted the justice of the definition, except in three points. 1. The crab was not a fish; 2. It was not of a red color; and 3. It did not swim backward. There are a number of plants with poisonous, drastic roots; but they are not all may-apples. May-apple is the vulgar name of the fruit of *Podophyllum peltatum*, and applied hence to the whole plant; but the roots, which are the parts employed in medicine (see Wood and Bache's Dispensatory, Art. "Podophyllum"); are not more "dangerously drastic" than many other roots used for similar purposes; and, indeed, in their ordinary dose, are not dangerous at all. As to their drastic nature, they do not possess it so much as gamboge or scammony. Yet of the first of these, Webster merely says, "it is a strong and harsh cathartic and emetic," and Worcester, that it is used in medicine "as a powerful purge;" while scammony is set down by Webster as "used in medicine as a cathartic," and Worcester gravely informs us, on the authority of the English Encycopledia, that "it is an efficacious and powerful purgative." Powerful, quotha! We should think it was. Unfortunate Podophyllum, a sort of modified American jalap, is put under the surveillance of the police as a dangerous character, while happy Messrs. Gamboge and Scammony, distinguished foreigners, walk along without the least suspicion.

One more notice, and we have done with the letter M. Both Webster and Worcester introduce the barbarous vulgarism, *mizzle*, which should have been confined to the pages of Hotten and Matsell. Webster contents himself with giving the second meaning as "to *take one's self off*; to go (*Colloq.*);" but does not define the taking one's self off, another vulgarism with a double meaning. Worcester, for some private pique against the editor of the *Tribune*, gives his second definition thus—"2. To run away, to abscond. [Low.] *Greeley*." To use Mr. Greeley as good authority for a low word may be sarcastic; but it is a very improper piece of humor in a dictionary, on a par with the definition of oats, attributed to Dr. Johnson.

So far as we have run through and compared the two works, the present edition of Webster appears to be fuller and more complete in its vocabulary, and quite as satisfactory in its definitions as Worcester. Having followed Worcester in placing syno-

nymes in their proper situations, it has thus far improved; but in the number, variety, and nice shades of distinction of these, it is not yet up to the point attained by its rival. In the supplementary vocabularies it is far beyond anything of the kind yet attempted. Its illustrations are numerous, and beautifully engraved. There is novel and interesting matter in its appendix. In short, with all its faults, it is the fullest and most complete volume of the kind extant; reliable in nearly everything but its orthography, where it occasionally clings to some of the eccentric innovations of Webster himself, here and there a few fragments remaining, after the storm of ridicule and contempt poured on them by the scholars of two hemispheres had somewhat subsided.

Yet some of this additional matter must have been prepared hastily, or by an incompetent person. The first thing in the appendix to Webster is "An Explanatory and Pronouncing Vocabulary of the names of noted Fictitious Persons and Places; including also Pseudonyms, Surnames bestowed upon Eminent Men, and such analogous Popular Appellations as are often referred to in Literature and Conversation. By William A. Wheeler, M. A." Certainly there is a good idea here. To make it valuable, however, it should be correct. Now we run over it hastily, and we find several errors. We observe that Mr. Wheeler sounds the second *h* in *Cleishbotham*, greatly to the wonder of the ghost of Sir Walter Scott, and gives us *Avenel* in three syllables, with the accent on the ante-penultimate, when the very extract quoted shows that Scott meant it to be pronounced in two. These are small matters, but they are mingled with greater. Mr. Wheeler informs us that the name of "Mother of States" is "sometimes given to Virginia, the first settled of the thirteen States which united in the declaration of independence." Either then we infer that she is so named from her elder settlement, or we are given no information as to the origin of the title. Now Virginia was thus called because of the States since created from the large amount of territory which she ceded to the Federal Government. Mr. Wheeler also tells us that "Omnibus Bill" was

"A name popularly given in America to a compromise act, originally reported by Henry Clay, which passed both houses of Congress in 1850, from the circumstance that several measures, entirely distinct in their object, were embodied in one bill. The most important stipulations of this act were those providing for the admission of California into the Union as a State with its anti-slavery constitution, for the admission of Utah and New Mexico as Territories, with no mention of slavery, for the abolition of the slave trade in the District of Columbia, and for the rendition of fugitive slaves."

Now all this is another definition of "crab." Omnibus Bill is only applied by a few, and improperly, to the compromise measures; the points he enumerates were not embraced within a single bill; and he does not inform his readers truly about the origin of the term. The phrase, "Omnibus Bill," is of Pennsylvania origin. It grew to be a habit in that State when important bills were before the Legislature, for the friends of the various projects to combine, in order to pass them. This combination was known as "log-rolling." A measure which could command the support of nearly, but not quite, a majority, had its passage secured by having attached to it a section embodying another measure, and thus combining in one the votes of the friends of both. It often became necessary to put together several measures to secure enough votes for all. For this end, after the title of the act, were added the words, "and for other purposes." The consequence was, that a bill entitled, "An act for the relief of John Smith, and for other purposes," might, after paying Smith the money due him by the State in the first section, charter a bank in section two; divorce Mary McFadjin and Phelim McFadjin in section three; radically alter the lien law in section four; and make it a penal offence to spell theatre with a final *r* in section five, all proper measures enough, but differing in their character. While this system flourished, omnibuses were introduced in Philadelphia, and soon replaced the cabs and hackney-coaches. A wag, who had noticed the incongruous nature and appearance of those who rode in the new conveyances, applied to an act then pending, embracing singularly diverse and discordant measures, the title, "Omnibus Bill." The phrase tickled the fancy of the Philadelphians, became popular, and thus spread.

A still more absurd error is to be found

in the same vocabulary, where we discover the following:

Mer'-e-dith Ow'-en. A pseudonym adopted by Sir E. B. Lytton. (b. 1805.)

This is another "crab" definition. Owen Meredith is the assumed name under which a son of Sir Edward Lytton Bulwer-Lytton, and who was born in 1831, published a volume of poems. The father never used the pseudonym at all.

What other errors a closer examination would reveal we cannot pretend to say, for we have no time to examine. These, however, are quite enough to show that Mr. Wheeler's work requires revision by some one less ignorant than he of the topics on which he treats.

Yet let it not be supposed that the appendix to Worcester is free from error, because it is less voluminous than that of Webster. We did not examine it, but happening to open it at page 1772, on a list of abbreviations, our eyes fell upon "R. W., Right Worthy." Now here is given an abbreviation of rare use in that sense, while "R. W." is initials in common use by the freemasons, and others, for "Right Worshipful," are entirely unnoticed. It is possible, then, that omissions and errors would be found on search there fully equal to those in the appendix to Webster.

In spite of the errors cited we maintain our opinion. The new edition of Webster is an exceedingly good one, and a nearer approach to perfection than has been hitherto made, except in the matter of orthography. The defects there are but slight, after all, and can be passed over by the scholar as a light offence, when he considers the value of the work in almost every other particular. For our own use we require both these volumes, and Richardson as well. Were we confined to one, we think we should choose that copy which bears the name, but has, in a great measure, abjured the orthographical heresies of Webster. If it be not entirely free from error, it approximates so nearly to perfection as to be a generally reliable book of reference. We wonder less at its defects, than at the fact of its having so few. At the same time, were Worcester revised thoroughly, we might be obliged to reverse our decision.

AMERICAN EDUCATIONAL MONTHLY.

JANUARY, 1865.

Waste of Letters.

IF the chronic fault of our writers and speakers be a redundancy of words, as seems to be generally admitted, it may be also said that we are given to the use of unnecessary letters in our writing. For the purpose of economy of time and labor, it has been proposed to teach Phonography in our schools, and to cause our children to place upon paper rapidly and surely the thoughts of others, or of themselves. It is a good suggestion. But why not also simplify our ordinary writing, by the use of contractions and abbreviations? Sir William Armstrong, in a recent address before the British Association, says:

"Cheap and rapid postage to all parts of the world—paper and printing reduced to the lowest cost—electric telegraphs between nation and nation, town and town, and now even (thanks to the beautiful inventions of Professor Wheatstone) between house and house—all contribute to aid that commerce of ideas by which wealth and knowledge are augmented. But while so much facility is given to mental communications by new measures and new inventions, the fundamental art of expressing thought by written symbols remains as imperfect now as it has been for centuries past. It seems strange that while we actually possess a system of short-hand by which words can be recorded as rapidly as they can be spoken, we should persist in writing a slow and laborious long-hand. It is intelligible that grown up persons who have acquired the present conventional art of writing should be reluctant to incur the labor of mastering a better system; but there can be no reason why the rising generation should not be instructed in a method of writing more in accordance with the activity of mind which now prevails. Even without going so far as to adopt for ordinary use a complete system of stenography, which it is not easy to acquire, we might greatly abridge the time and labor of writing by the recognition of a few simple signs to express the syllables which are of most frequent occurrence in our language. Our words are in a great measure made up of such syllables as com, con, tion, ing, able, ain, ent, est, ance, etc. These we are now

obliged to write out over and over again, as if time and labor expended in what may be termed visual speech were of no importance. Neither has our written character the advantage of distinctness to recommend it—it is only necessary to write such a word as 'minimum' or 'ammunition' to become aware of the want of sufficient difference between the letters we employ. I refrain from enlarging on this subject, because I conceive that it belongs to social more than to physical science, although the boundary which separates the two is sufficiently indistinct to permit of my alluding to it in the hope of procuring for it the attention which its importance deserves."

The subject is one which deserves attention. There is inventive genius enough in the country to devise a system, by which, without too much shock to our habits, contractions, abbreviations, and arbitrary signs, might replace prefixes, suffixes, and frequently recurring words. Something approaching to the old short-hand system would answer the purpose. It would save time, and frequently retain ideas, in the shape originally taken in the mind.

A Book Wanted.

AMONG the many texts books most needed in our schools, is one which shall clearly explain to the pupils the nature of the government under which we live—the relations of the State to the people—the powers and duties of the Federal government, and of those great municipalities which form the Union; and the views which animated the framers of the Federal Constitution. Such a work, if freed entirely from partisan bias—not by ignoring party, but giving fairly the views of differing statesmen, in plain and simple language,—would be readily understood by the more advanced pupils, and would be a valuable instrument in a course of thorough education. Such a work would be profitable to both author and publisher.

The Auxiliary Home Government.

THE importance of assistance from the parents, in the instruction of children, cannot be too strongly insisted upon. The heads of families rely upon the teacher entirely, in many cases. So far as the formula of instruction is concerned, they are right. But the lack of discipline at home affords frequently a strong bar to the ready receipt of instruction at school. The government of the school is patriarchal,—the teacher, during school-hours, stands *in loco parentis*,—a father as well as a pedagogue. But the parental government, singularly enough, closes upon the return of the child to his home. There he is very apt to rule. He is released from that kindly restraint, which is the surest preparative to his own era of legitimate command. The discipline of the school becomes irksome by contrast; and the time that should be used in earnestly endeavoring to acquire knowledge and comprehend the lessons given, is invaded by attempts to evade regulations or defy authority. The subject is an important one, and should receive careful consideration by the thoughtful parent.

A Word in Season.

IN a business communication sent to us by a respectable firm, we find the following sentence:

"We would like to occupy a large share of your advertising pages; but we expect a first-rate notice of the book."

We might as well take occasion to define our position in regard to this matter of "notices." Our advertising pages are open to the public, and any advertisements not improper in themselves, will be inserted therein at the established rate of compensation. If the firm referred to, which is well-acquainted with the extent of our circulation, and its nature, think it would pay to advertise, they will do so; if not, they will refrain. They are shrewd men, and know their own business. But our editorial pages, and our reviews, reflect our own opinions solely, and shall so continue to do. If a book, submitted to us for notice, possesses merit, we give it praise in

no stinted measure; and where it has faults, we shall not withhold our censure. Whether our opinions be right or wrong, our readers desire to have them in their integrity, and they shall not be disappointed. We shall be very well pleased to have the advertisement and the book. The former will be properly inserted, and the latter receive just such notice as its merits or demerits deserve, and that in the plainest English at our command. "Only this, and nothing more."

EDITORIAL CORRESPONDENCE.

EDINBURGH, SCOTLAND, Dec. 12, 1864.

The Excellence of the Scottish Schools.—The Undemocratic Principle in them.—The George Heriot Schools.—Visit to One.—The Normal Schools.—Private Schools.—General Remarks on the Edinburgh Schools.—The University.—Shameful Scenes at the Opening of the Winter Session.—Sir David Brewster.

EDINBURGH is famed for its schools. And certainly not without reason, for in respect to the thorough preparation of the teachers, the excellence of the buildings and their appointments, and the manner in which instruction is imparted and stimulus given, not much is lacking in the Edinburgh schools. Their range is very great, extending from the infant-school to the University, thus opening wide the arms which welcome to any degree of proficiency in science. And yet, wide as is their compass, and thorough the system which they represent, they are all marred by what may be called the Feudal principle, or perhaps, more intelligibly still, the undemocratic principle. Not quite all, however, for the University must be excepted: a thoroughly democratic institution. But the class spirit is everywhere else dominant; to me, hatefully so; and, admirably managed as are the schools, yet the want of that blending of all the elements of society for the common good, which is the chief characteristic and the glory of our Union, is here so consciously and so painfully lacking, that much of the good is lost.

Beginning at the bottom in point of social prominence, we come to the George Heriot schools. Many of my readers remember "jingling Geordie," of the "Fortunes of Nigel," and some may be aware that that man, under his real name of George Heriot, left to his own beloved Edinburgh a large sum of money for the education of needy children. The first fruit of his liberal gift was the Heriot Hospital, for the maintenance and education of orphans, and the children of indigent parents. This princely institution harbors nearly two hundred of these, but the surplus funds have accumulated to such an extent that eight grammar schools and four infant-schools have been established at different parts of the city, to which admittance is free. The buildings for these schools are expensively made, and fitted up with all necessary appliances, and text-books are provided free of charge. Three thousand scholars are educated by this surplus money of the Heriot foundation, and at the present time £11,000 are spent yearly on the Hospital for the education of 180 boys, and £14,000 for the secular education of 3,000 children. The money seems to be most judiciously spent for the latter, as the schools are admirably managed. And yet there is a doubt of this, of which I will not speak in full, but only touch it with a passing reference. For, in the first place, the 180 boys are brought so continuously under the moral and religious discipline, that they almost universally turn out well in life; but then, again, it is not a good thing for people to receive the books and instruction of their children without some tax, either direct or indirect. People do not value that which costs them nothing. And then again, schools for the poor are baneful in the chilling and disheartening tone of feeling which they gender; they create a class feeling among the poor, they put a stigma upon poverty, as if it were a curse and not an inconvenience, and they engender a supercilious pride among the rich.

How much better every way our blending of poor and rich together; the rich taxed relatively to their greater wealth, and the poor relatively to their lesser wealth, but both feeling an equally heavy burden.

I visited one of these Heriot schools, and was received with much civility. The head teacher was a vigorous man, and did his work well. He was surrounded by a company of ruddy children, seated on benches without backs. The boys were uncovered, but some of the girls wore their straw hats, and some wore none. In the higher grades of schools, the pupils were all uncovered, as with us. In the back part of the large room, another class was standing on the benches, reciting to a lady—a fiery and energetic little woman, whose will flashed even in somewhat tingling utterances from the rod which she carried,—for Solomon's injunction is not forgotten or outgrown in God-fearing Scotland. The reading was well taught; the arithmetic also; but the parsing, of which there was a redundance, was in the old-fashioned Lindley Murray style, making no demands upon any faculties excepting the Yankee faculty of guessing. I had the pleasure of seeing in other schools, that a better method was pursued, that a strict analysis was followed; and that there are teachers in Scotland who see that grammar is a convenient manner of expressing, in the most compact form, the elements which enter into language, rather than a mere unmeaning jargon to burden the memory with. But in this Heriot school there was little to learn; the teaching of reading and arithmetic was good, that of grammar meagre and poor.

There are two great Normal schools in the city, which are well worth visiting. The word Normal has not the same meaning here as with us, but rather designates a model school, with a training establishment for teachers attached to it, as a subordinate and not a dominant characteristic. One of these schools, that near the Imperial Castle of Edinburgh, under the admirable direction of Rev. Mr. Currie, I have twice visited. It is, certainly, one of the finest schools I ever saw. The Teacher's Training school numbers about 60; the model school for boys and girls about 700. They are of all ages, from beginners in knowledge up to young men and women of twenty-five. There is nothing stereotyped or hackneyed in this school. The rooms are spacious, elegant, and comfortable; the teachers superior; the instruction thorough, fresh, and stimulating. The children are not taught the alphabet at first, but the simplest words each, as a picture, and when the eye is familiar with such combinations as *is*, *on*, *to*, *up*, etc., the phonetic system of spelling is taken up; these simple monosyllables are combined phonetically; the alphabet gradually taught letter by letter, and at last the full mysteries of our obscure and complex orthography mastered. In the grammar, a close system of analysis is introduced, not one which demands an intricate nomenclature for its expression, but the old, common mode: yet so admirably is the analysis of sentences pursued, that the scholar is driven perforce to grammar, to gain the easiest and shortest method of expressing himself. In geography, however, the greatest progress has been made. Here the theory which our lecturers long ago propounded, becomes actual practice, and Ritter's favorite method, of beginning at home, is successfully tried. The first map put before the scholar is that of Edinburgh. He must become familiar with it—with all the hills and valleys, with all the water-courses in its neighborhood and their miniature water-sheds; he must learn all its historical associations, all its geographical conditions. From Edinburgh city he passes to the county of Edinburgh, then to Scotland, then to the whole island, then to the group of the United Kingdom, then to Europe, and so on. A most intelligent method. I think we have got to come to State Geographies yet with us, and not to those which discuss on equal terms of fulness all the States. Or else we shall have to invent a little book of questions, which can be of universal application, and which will allow the teachers of any given spot to develope all its peculiar geographical characteristics. This is the better method, and one most feasible.

The tuition in these model schools is low, only about a pound a year to each pupil. The salaries paid to teachers range

at a little lower figure than with us; the most competent assistants receiving about $1,500, and the principal about $2,000. To these schools parents send, who are neither rich nor poor, and the standard of morals and manners is very good.

There is then another rank of schools to which the classes well-to-do send their children. The two principals of these are Mr. Hunter and Mr. Oliphant. It cannot be denied that these are excellent schools: but hardly superior to our best American ones. In Mr. Hunter's, the object system is mainly employed: not ostentatiously, and with a paraded show of great results, but as if a very simple, and natural thing. The school-rooms are plentifully supplied with maps, and the walls are ornamented with cases of natural curiosities, each one of which is made the nucleus of much pleasant teaching. I heard a most instructive lesson on bears given on a very slight text, but one which awakened an interest that was not exhausted till the whole subject of bears had been canvassed with a minute fidelity, which would have delighted even that great connoisseur in bears, Theodore Parker himself. Dr. John Brown, the author of that delightful book, published by Ticknor and Fields of Boston, "Spare Hours," has done a great work here by his personal influence in behalf of object teaching, and his fine article on Education Through the Senses, is remembered here in a manner worthy of its merits. These schools are strictly private, and are not unlike the large schools which are found in Brooklyn, and which are equally admirable. Yet they are undemocratic and dangerous: they keep the currents of popular life from blending together; they alienate the affections and interests of those who are naturally equal in intelligence, in morality, in natural nobleness, and only unlike in the accident of wealth. The scholars are taken at the very commencement of their school-days, and retained in them till they cease to receive instruction. Mr. Hunter's and Mr. Oliphant's schools number about 300 each.

Higher than these are the celebrated High School, the Edinburgh Institution, and the Academy. These are the great classical schools of the city, giving a thorough drill in the ancient and the modern languages, and the higher mathematics, and are attended mainly by lads who intend to enter a liberal profession. I may speak of them more in detail in a future letter.

On the whole, it may be said, by way of brief summary, that no American, familiar with our best schools, need visit Edinburgh to receive hints which he could not equally well gather at home. Neither the discipline, the method of instruction, the arrangement of the buildings, nor the quality of the text-books, strike me as superior to our own. And I am delighted to find, that with the dislike of all other republican institutions, there is a perfect willingness to admit the excellence of American schools, and to set their place among the very first in the world. I think the school-houses of Edinburgh in no ways before ours, the seats inferior, the instruction not superior as a whole. Corporal punishment is retained to a somewhat greater extent than with us; there is an equal appeal to the principle of emulation by prizes and rank in the class-room. That admirable feature in the teaching of geography, to which I have alluded, is probably not unknown with us, among those of our teachers who have carried into effect the instructions of Guyot, regarding the true method of taking the pupil from the study of his own home to the study of what is more remote. The teachers of Edinburgh, like our own, seem an intelligent, devoted, moral class of men, exerting a healthful influence not only upon the pupils under their charge, but on all public interests. They are, as a body, held in much respect, but assuredly not more than they deserve.

The University of Edinburgh crowns the whole. It gives a complete training in theology, law, medicine, and the various branches of literature and science. The number of its students varies from one to two thousand. The number of professors is a little more than thirty. The corps has numbered many men of world-renowned name, Dugald Stewart, Dr. Robertson, Playfair, Dr. Thomas Brown, Sir William Hamilton, John Wilson, Dr. Black, Hugh Blair; and on its rolls are even now the distinguished names of Aytoun, Syme,

Simpson, Blackie, and Lee, while Sir David Brewster is the Principal, and Alexander Smith is the Secretary. There are many other men very eminent, in Scotland, but not known as yet with us. Of the method of instruction, which is by lectures with questions, I need say but little. It is not unlike that pursued in our own professional schools. The fees to the courses for the half year vary from two to four guineas each, the usual price being about three. Aytoun, the editor of "Blackwood's Magazine," is a man of forbidding aspect, but a very agreeable lecturer. His department is English literature. A great hater of America, he is, notwithstanding, a very affable and delightful man. Sir David Brewster, the principal of the University, wears his age wonderfully. He is upwards of eighty, and yet is hale and vigorous; his youngest child was born two years ago, He is perfectly erect, and has a singularly benign, sweet expression. Indeed, I have rarely seen so beautiful an old man as Sir David appeared at the recent opening of the winter session of the University. Arrayed in his purple robe, his hair perfectly silvered, his form unbent by age, and with his mild face, his was a figure and an aspect never to be forgotten. His mind retains all its old vivacity, and his imagination all its fire. No man more commands the love and admiration of the Scots than he.

Let me close this letter by speaking of one of the most disgraceful relics of a barbarous age, which disfigure the high civilization of this century. At the opening of the winter session, the amphitheatre devoted to the students was filled to repletion, and a volley of peas saluted every newcomer. About a thousand young men were there, and for some minutes they amused themselves with singing, stamping, and throwing peas. What a change will come over this scene, thought I, when Sir David Brewster and the professors shall enter! But, on the contrary, their entrance was signalized by fresh volleys of peas, and the most unearthly din I ever heard. It was as loud as the screaming of a hundred steam whistles! Sir David stood uncovered, his fine venerable head the target for these missiles, while the professors and the *senatus academicus* hid theirs behind their square caps. For a minute this continued, and then one of the faculty tried to pray. But his voice was almost drowned in the catcalls, the indecent cries, the stamping, and the hissing, while his closed eyes were made the target of a fresh volley of peas. When that service had been brought to a close, Sir David began his address, and labored on as well as he could, the students being apparently bent on applauding every sentence. Peas were flying, and the whole scene was one which made my blood boil. By-and-by one of the professors rose and said, "I see a young man in the act of throwing peas. *That* young man will rise." All eyes were turned in the direction of the professor's finger. The whole room was full of cries, "Don't get up." But the professor insisted, another came to his assistance, and demanded that the principal should cease attempting to go on till "this insult which we have been enduring year after year shall be checked." At length the young man rose, and his name was secured. That put an end to the throwing of peas. Meanwhile, the pounding of feet commenced louder than ever. At one point the principal stopped and said, with some feeling, "Those persons who do not wish to hear me had better retire." But still the indecent noise went on, and Sir David struggled on, never losing his calm placidity, and wearing the same beautiful face to the end. The remarks of Professor Lee, which followed, were fairly drowned with the din. One of the professors attempted to pronounce the benediction, but no sooner had he raised his hands to speak the hallowed words, when a fresh volley of sounds broke forth. At last he managed to catch a moment, and pronounced a hasty benediction. On the whole, it was the most hateful exhibition which I ever witnessed. I met Alexander Smith, the poet, directly after leaving the hall. "Don't taunt us with even a civil war after this," I said to him; "there is *nothing* in America that can compare with the shameful scene which has just transpired here in your University of Edinburgh." Doubtless a few years will see this done away, but the recollection of the annual opening of the classes by the

principal will long be retained as the last traces of the age of violence and brute force. But even now, while I think of such indignities offered to Sir David Brewster, to Drs. Syme and Simpson, to Dr. John Brown, the author of "Spare Hours," to Blackie, to Aytoun, and Christison, I feel like crying "Shame" on the young men of the University fortolerating and encouraging such indecency. W. L. G.

SCIENCE AND THE ARTS.

——Popp, after an investigation of the rare earth, Yttria, has arrived at the conclusion that the metals *terbium* and *erbium* do not exist. He also considers the existence of *lanthanum* very doubtful, so that it is probable that this metal may be stricken from the list of elements, and go the way of *donarium*, *norium* and *wodanum*. Popp and Delafontaine have, independently of each other, examined the so-called oxyd of *wasium*, of Bahr. They agree that the supposed new element does not exist. Delafontaine has determined the equivalent of *thorium* from numerous analyses of the sulphate. Regarding the formula of thoria as Th. O_2, the equivalent of thorium is 115.6. In this determination the value of oxygen is taken as 8. Bischof has discovered a new earth in a calcareous mineral. As yet it gives no characteristic reaction with either the blow-pipe or spectroscope. No name has yet been given to it. A more thorough examination will be made as soon as sufficient material can be obtained.

——On the 27th June, M. Fremy made the following statements: As his name had frequently been mentioned in connection with spontaneous generation, he took occasion to say that he repelled, without hesitation, the idea, if it be applied to the production of an organized being, even the most simple, from elements not possessed of the vital force. Chemical synthesis enables us, beyond doubt, to reproduce a number of proximate principles of vegetable and animal origin, but organization, in his view, puts an impassible barrier to these synthetic reproductions. He does not regard the protein series as proximate principles, but rather as semi-organized bodies, which bear the same relation to organization, etc., as a dry seed, which continues for years without presenting the phenomena of vegetation, and which germinates when submitted to the influences of the atmosphere, moisture, and heat. They can, for a long time, remain in a state of organic immobility, but may pass out of this state, and afford, at the expense of their own substance, all the elements of organization when circumstances become favorable for organic development.

—— Davy referred the action of his safety-lamp to the cooling action of the wire gauze. Krönig, in Poggendorf's Annals, proposes the following:

"Although experiments show that a wire gauze can cool the gaseous products of combustion present in a flame to a point below the temperature at which they ignite, the question arises, upon what does this action depend? Several things are possible. A cold wire gauze introduced into a flame can take away heat, but the cooling thus caused is less the higher the temperature of the gauze rises, and a continuous cooling of the flame by the gauze is probable only when the latter loses on the outside the heat it receives from the flame. Such a loss may occur either by radiation or conduction. If the flame be small, heat may be conducted from the middle of the heated gauze, but the greater the flame the less this will be. Hence it is probable that the gauze loses heat more by radiation than by conduction. This assumption, that the wire gauze radiates more heat than the gaseous flame, is a matter of course, as we know that ignited solids radiate more light than gases at the same temperature." Graham says that the the efficacy of the gauze is increased by soaking in the alkaline solution.

——Professor Hinrichs bases his theory of terrestrial magnetism upon the hypothesis that an electrical current is a current of ether; from this he deduces the conclusion that all heavenly bodies, having a translatory and rotatory motion, are magnets. Hence the sun is a magnet. Since the solar spots are changes in the solar atmosphere, and, as they change, so must the ether current, and as any change in this current must produce a change on the solar magnetism, and through it upon terrestrial magnetism, it follows: (1.) That the elements of terrestrial magnetism change in harmony with the change in the solar spots. (2.) As the sun rotates around an axis differing from his magnetic axis, there must be a period in terrestrial magnetism equal to the apparent time of the sun's rotation, viz., $27\frac{1}{4}$ days.

EDUCATIONAL INTELLIGENCE.

——The report of the Board of Trustees of the Public Schools at Louisville, for the past scholastic year, displays satisfactory success in all the departments of instruction, and confers great credit upon the Board, and its efficient Superintendent, George H. Tingley, Jr. The average number of pupils belonging to the ward-schools was 4,874, of which the average attendance was 4,143. The average number in the high-schools, male and female, was 225, with an average attendance of 210. The cost per pupil on the average number attending was an average of $13.63 per annum in the ward-schools, and $70.56 in the high-schools. Taking the average number belonging, which is the ground in some cities, the expenses would be $11.58 for each ward-school and $65.85 for each high-school pupil. The management of the Louisville high-schools is not surpassed by any others perhaps in the country, except as regards physical culture of the pupils. That very important adjunct to mental discipline is totally neglected, from some inexplicable cause.

——At the annual meeting of the Rhenish School Teachers' Association, for 1864, held at Dusseldorf, many interesting subjects were discussed. Mr. Jager, principal of the "Real" school at Meurs, proposed eight Theses concerning the amount of private study to be imposed upon the pupils, proposing to reduce this greatly, especially the number of compositions demanded from the members of the higher classes. These, in some schools, amount to thirty-six yearly, equally distributed among the German, French and English languages. It was proposed to reduce this number to four compositions in each language during the course of the year, and to increase the number of extemporaneous exercises in composition and translation at the schools. Mr. Löhrbach, from the "Gymnasium" at Andernach, then spoke concerning the importance of substituting a more thorough study of the French for the surplus of Latin, and thus to make a great approach to the "Real" schools. Mr. L. spoke for sometime on the importance of the change proposed by him, his chief argument being based upon the fact that the Latin no longer occupied its former all-important and universal position, while the French, on the other hand, had become an almost universal medium of conversation, and its acquisition was absolutely necessary for every one who laid claim to anything like a liberal education. Mr. Hausen, from Lennep, then spoke on the arrangement of instruction at schools; on the necessity of making such an arrangement and collocation of courses of instruction as would best aid a generous development of all the powers of the intellect. After some remarks by Mr. Heinen, from Dusseldorf, upon the studies to be desired from the students of the "Real" schools at graduation, and the discussion of a social supper, the meeting adjourned till next year, at Cologne.

—— In the primary schools maintained by the town of Paris, instruction is abso-

lutely gratuitous; but it would appear from the following letter, addressed to the *Patrie*, by an inhabitant of Montmartre, in the northern quarter of Paris, that, even with that facility, primary instruction is not always within reach of the poor:—"On paying a charitable visit to a poor family at Montmartre, I found a wretched woman and five children; the father, who had been ill for six months, was in the hospital. I asked if the eldest of the children, a boy eight years of age, went to the district school; and was told that his name had been entered on the books eighteen months ago, but that his turn for admission had not yet come. Doubting the accuracy of this statement, I made inquiry and found that not only the school in Dejean street, though capable of accommodating two hundred pupils, was always full; but that there were nearly six hundred children entered on the book for admission, and that a child has usually to wait more than eighteen moths before its turn comes. I learned, also, that another school, situated higher up the hill, was in likemanner crowded; and that three hundred candidates for admission were there entered on the books."

The authorities have thought proper to answer the above letter, by alleging that it exaggerates the number of children excluded from the schools by want of room; and that the requisite accommodation is being provided.

A great difference has hitherto existed as to position, between male and female elementary teachers in France. To the former is assured, besides a free house, a minimum annual salary of £24, made up, according to M. Guizot's law of 1833, still substantially in force, of school pence, the revenue of whatever property may have been bequeathed to the schools, and a contribution from the ordinary parish funds. Should these items not bring up the teacher's salary to the legal minimum, an extra three centimes, somewhat more than a farthing, is added to one of the parish rates; should this also leave a deficiency, the county (*département*) makes it up by adding an extra two centimes, somewhat less than a farthing, to one of the county rates; and should a deficiency still remain, said deficiency is made up out of the imperial exchequer. On retiring from active employment, the male teacher becomes a pensioner of the State.

For female teachers, on the other hand, no free house is provided by law, no minimum of salary is fixed, no pension is guaranteed. Accordingly, it is not wonderful that elementary instruction should be less widely spread among girls than among boys, and that the great majority of elementary female teachers in France should be nuns. It is now proposed to extend to female teachers all the privileges of their male fellow-laborers.

CURRENT PUBLICATIONS.

Mr. Hall, the intrepid Arctic explorer, is now wintering at some extreme northern point, feasting upon raw seals' entrails, and other hyperborean delicacies; chatting with his Innuit friends; and otherwise enjoying himself—for in his case it is apparently pure enjoyment—in regions, the very name of which makes the hearer shiver. In his absence we have the privilege of reading his clever narrative of former explorations, of which we have had appetizing bits from time to time, and which is now issued in a large and attractive volume by the Harpers.[1] The style of Mr. Hall is simple and unpretentious, but the book is as fascinating in its incident and adventure as a romance. The current of the story flows on without any attempts at fine writing to mar the effect or disturb the attention. The author paints faithfully a panoramic view of the Far North, and lends to the rude, animal life of the Innuits a charm beyond its own. The merit of the narrative is heightened by the illustrations, which are cleverly designed and admirably executed. As works of art some of them are notable; indeed it may be said of the greater part that they are marvels of execution in the way of wood-engraving. We can recommend this volume as capital reading for the fireside, as well as a necessary

(1) Arctic Researches, and Life Among the Esquimaux; being the narrative of an Expedition in Search of Sir John Franklin, in the years 1860, 1861, 1862. By Charles Francis Hall. New York: Harper & Bros., Imp. 8vo, pp. 398. *Maps and Illustrations.*

part of any well-chosen library; and hope for the safe return of the explorer, with materials for another equally entertaining volume.

A very necessary but very nice little book, small in size, but great in consequence to the younger students of French, is the new *Abecédaire* of Professor Zender.[2] It is a capital foundation for thorough French instruction; a primer for the juvenile learner which should find its way at once into all schools and families where they mean to begin at the beginning in teaching the foremost of the Romance tongues. The *Gymnastique Vocale pour les Organes d'Articulation*, on page 58, is both amusing and instructive, and will tickle the fancy of the smaller students while it impresses the elementary sounds strongly upon their memory. The little vocabulary and *Prieres à Dieu* which follow, aptly close this very useful and necessary little manual.

We have already spoken with favor of a smaller work by Mr. Walton, "The Dictation Exercises,"[3] and find in a later and more complete volume by the same author merits which should induce teachers and others whose business it is to select proper text-books, to give it a close and careful examination. It is certainly an exceedingly practical work, and without drawing comparisons between its methods and those of others, for which we have not here the space, we are impelled to say that it is well adapted for school purposes.

The Ecclesiastical History, of Marsh,[4] is a standard work, requiring no notice nor analysis; but the fact of the appearance of a sixteenth edition, revised by the author, and brought down to the latest dates, may properly enough be mentioned. In a comparatively small space all the essential facts of church history are clearly presented; and there is an evident intention to give a fair exposition of the tenets and practices of the various sects that divide the religious world. In those schools where ecclesiastical history is part of the line of instruction, this volume will be a necessary text-book.

An interesting biography of the late Professor, afterwards General Mitchell,[5] is among the latest issues from the press. Written in Mr. Headley's usual glowing style, it will captivate the fancy of the youthful reader, while a summary of the events in the career of one so distinguished in the scientific world, and the incidental information upon collateral topics scattered through the work, cannot fail of proving profitable. The design of furnishing biographies of distinguished men, written in a popular style, is a good one; but the lives of the great in science, art, or literature can rarely be given with effect during their own generation. Mr. Headley has mastered, in the main, the difficulties attendant on the subject, and his little volume will meet with a ready sale.

There is always a curiosity in the public to know something of the history and habits of notable people, and of no class of notabilities more than operatic artists. Miss Clayton—or, it may be Mrs. Clayton, for we are not sure as to the condition of the lady—has undertaken to satisfy this curiosity in a lump. In a large but delicately printed and portable volume,[6] she gives us gossipy and interesting biographies of the principal female operatic singers, from Katharine Tofts to Teresa Tietjens. She omits Patti, Parodi, and some others of the present day, who are well entitled to a place; but the book is already voluminous. Outside the interest lying in the melancholy details of the lives of some—the harrowing record of their jealousies, intrigues, and sorrows—the scandal that followed the virtuous, and the infamy that attended the vicious—the queer bits of history, not in more stately chronicles—the book shows two things, one physical, and one philosophical. The physical fact is the homeliness of great singers as a rule, for if the portraits are correct, only Malibran and Piccolomini were possessed of beauty; and the philosophical fact is the close similarity between the inner operatic life in all ages, since the lyric drama became a fixed institution. The book is a healthy one, morally and intellectually, and is written gracefully and delicately. The list of operas at the close we have never seen so complete elsewhere, and it is valuable as a matter of reference.

"Silliman's Journal" for November contains several articles which will be interesting as much to the general reader as to the purely scientific man. The papers by Profs. Winchell and Rood contain a great amount of valuable information. The Journal for the coming year will be diminished in size. We regret this, thinking that the subscribers would willingly have paid an increased subscription. As it is, we hope that the magazine will be more liberally supported than in the past, as it is the only purely scientific magazine in the United States.

(2) ABECEDAIRE FRANCAIS-ANGLAIS, illustré, suivi d'un vocabulaire pittoresque, contenant environ 500 vignettes, à l'usage des deux nations. Par le Rev. J. D. L. Zender. New York: Schermerhorn, Bancroft & Co., 130 Grand street. 18mo, pp. 60.

(3) A WRITTEN ARITHMETIC, FOR COMMON AND HIGHER SCHOOLS; to which is added a complete system of Reviews, in the form of Dictation Exercises. By G. A. WALTON. Boston: Brewer & Tileston. 12mo, pp. 336.

(4) AN EPITOME OF GENERAL ECCLESIASTICAL HISTORY, from the earliest period, with a condensed account of the Jews since the Destruction of Jerusalem. By JOHN MARSH, D.D. Sixteenth edition. New York: W. W. Dodd. 12mo, pp. 464.

(5) THE PATRIOT BOY; or, THE LIFE AND CAREER OF MAJOR-GENERAL ORMSBY M. MITCHELL. By the Rev. P. C. HEADLEY. New York: W. H. Appleton. 16mo, pp. 342.

(6) QUEENS OF SONG; being Memoirs of some of the most celebrated Female Vocalists who have performed on the Lyric Stage, from the earliest days of the Opera to the Present Time; to which is added a Chronological List of all the Operas that have been performed in Europe. By ELLEN GREATHORNE CLAYTON. With Portraits. New York: Harper & Brothers. 8vo, pp. 543.